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AUTHOR Price, Nelson C.
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ABSTRACT

This monograph defines program evaluation as the process of placing a value on a program, with the two major benefits of evaluation being those of expanding the base for decisionmaking, and the providing of information to motivate the individual, or unit, to improve performance. Most importantly, program evaluation is needed to determine if a program warrants continued operation at the same level of support. This publication should provide competency in developing an evaluatable program and a reporting strategy, identifying the right questions and sources of evaluation data and the forms suitable for collecting such data, methods of selecting an evaluation team, and the differences between formative and summative evaluation. Included in the appendixes are sample blank copies of program evaluation forms. (Author/DN)

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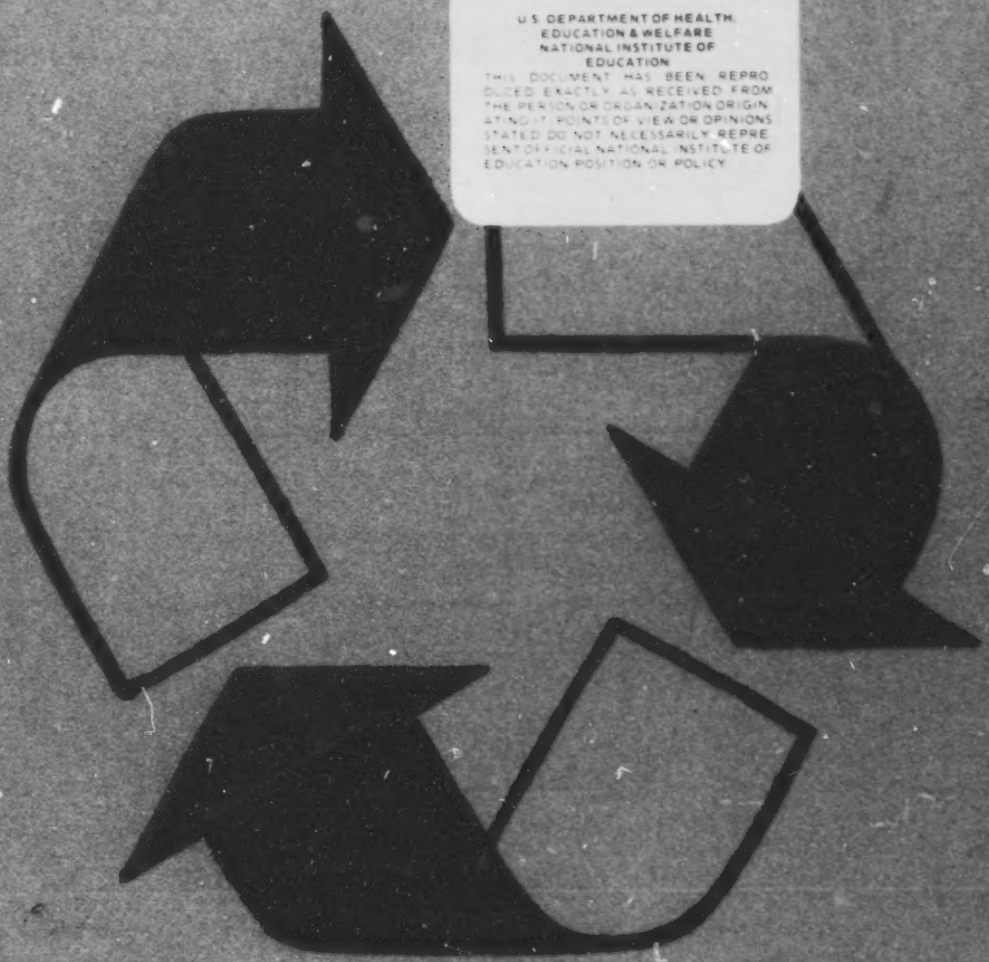

program evaluation

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PROGRAM EVALUATION

by

Nelson C. Price, Ed.D.

Planning Associate
Planning and Development Division

April 1, 1974

San Mateo County Office of Education
J. Russell Kent, Superintendent of Schools
333 Main Street Redwood City, Ca. 94063

THIS MONOGRAPH IS ONE OF A SERIES OF MONOGRAPHS ON APPLICATION OF MANAGEMENT PRINCIPLES TO EDUCATIONAL ORGANIZATIONS.

Developing Performance Objectives
Establishing Goals and Goal Priorities
Time Management
Management by Objectives *
Organizational Structure and Climate *
Effective Meeting Management *
Program Evaluation

* *In process*

This monograph tells a lot about program evaluation. If you are already an expert in evaluation, you may want to skip most of this material and turn directly to the heart of the matter. That is, "putting it all together." You will find that on pages 61-65. If you do not consider yourself an expert in evaluation, perhaps you will want to examine other portions of this paper as well.

By the time you reach --

page 3, you should know what evaluation is and is not.

page 8, you should be able to develop an evaluatable program.

page 15, you should be able to ask the right questions and identify sources of evaluation data.

page 19, you should be able to explain the difference between formative and summative evaluation.

page 23, you should have identified forms suitable for collecting evaluation data.

page 40, you should be able to select your evaluation team.

page 46, you should be able to develop your reporting strategy.

page 64, you should be able to conduct successful program evaluation.

But remember --

Educational evaluation in any form is only worth doing if sooner or later it benefits the learning of pupils.

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A LOOK AT EVALUATION IN GENERAL

This monograph focuses on program evaluation. However, before considering program evaluation specifically there are some general observations which help put that phase of evaluation into context.

> When you complete the study of material presented here, you will be able to prepare your own plan for program evaluation, including the schedule and sample forms for data collection and reporting; and your plan will be based on the best of current theory and practice.

Evaluation is the placing of value or the ascertaining of merit through the sustematic consideration of the best available data or information about the thing being evaluated. Evaluation is not a "BOAT"!

It is not Budgeting
It is not Objectives
It is not Accountability
It is not Testing

However -

the process of evaluation may provide for consideration and use of all these concepts and activities.

We have now looked briefly at what evaluation is and what it is not. Next let's examine some terminology often related to evaluation.

Here are some of those terms described operationally: Take a 100-yard dash sprinter for example:

Measurement answers: "How fast did he run the 100-yard dash?"

Assessment answers: "How well did the athlete meet his objectives?"

> Why Evaluate Education?
>
> The need for a continuing assessment of the progress of education in this country arises from the great demands which are now being made upon education. Most of the goals we seek as a people require education as a means of reaching them. To meet these demands, the American people are furnishing far greater resources for our educational institutions than have ever been available before. Yet much more is being requested. It is clear that the resources required cannot be provided except by using the greatest care in their allocation and use. The public needs to understand more adequately what educational progress is being made and where the critical problems lie on which much greater attention and effort must be focused. The public needs this kind of information in order to give intelligent backing for the decisions that must be made to use resources wisely to produce maximum results. Ralph W. Tyler in "Why Evaluate Education".

Accountability answers: "Did the Coaches keep their commitments to the athletes? To the School-Community?"

Research answers: "Which training method proved most successful?"

and -

Evaluation requires judgments like: "Which boys shall we keep on the team? Which Coaches shall we assign to what activities? Shall we abolish the track program?" etc.

> The ultimate worth of any evaluation lies in the benefits it provides for students. This criterion should be kept uppermost in mind in any evaluative effort.
>
> Ludka Vlaandeven

Evaluation has two basic purposes. First it provides information for making decisions, including the allocation of resources. In educational circles this may involve decisions of larger units such as the State Department of Education, a school district, or county office. On the other hand, decisions may affect only the individual teacher or pupil. The scope of decisions vary, but their importance to those affected by them is not lessened by their scope. The wisdom of decisions can be greatly affected by the data provided to decision makers through the evaluation process.

The second purpose in evaluation is to provide either a sense of satisfaction or to present a challenge to do better. Knowing how well one is doing is directly related to the level of morale of the individual or of the unit being evaluated. Thus, the two major benefits of evaluation are to expand the data base for decision-making, and the providing of information to motivate the individual, or unit, to improve performance. If the information is not used for these purposes it is worthless.

Under these two major purposes of evaluation are numerous sub-purposes. Individuals and agencies place differing emphases on these sub-purposes to meet their particular needs. The following chart illustrates the changing emphases placed on various types of evaluation by a local educational agency as compared to the State Department of Education. (p. 4)

What is the difference between program evaluation and evaluation in general? Re-read the definition of "evaluation" on page 1. *A PROGRAM IS a group of related processes (activities), content, materials and personnel organized so as to attain specified goals and objectives. In most cases it should be possible to identify the specific results or outcomes of the program and its costs.* Obviously program evaluation is the process of placing a value on a program.

If we were to make a hierarchy of complexity in evaluation, the work with programs would fall near the center. Thus the evaluation of smaller "units" such as a single activity, the progress of a pupil, or a teacher are less complex, while the evaluation of a total institution such as a school or school district is more complex. When systematically combined, the data from smaller "units" form a major part of that needed for evaluating a program. The composite data from the various programs of an institution contribute significantly to evaluating the overall endeavor.

You should now be able to explain what evaluation is - and what it is not - and answer the question, "Why evaluate?"

PURPOSES OF EVALUATION

Primary Purposes

District and local (ours)	The State (Our perception of theirs)
1. Measure individual student progress	5. Measure achievement of state objectives
2. Monitor program progress	6. Justify continued funding
3. Determine effectiveness of technique	7. Report results to the profession
4. Inform parents and community	8. Compare effectiveness of programs

Secondary Purposes

5. Measure achievement of state objectives	1. Measure individual student progress
6. Justify continued funding	2. Monitor local program progress
7. Report results to the profession	3. Determine effectiveness of techniques
8. Compare effectiveness of programs	4. Inform the public

Note: Numbering is provided only to make it easier to identify similar items in the two columns.

Developed by an ad hoc committee in Evaluation and Early Childhood Education, San Mateo County, July 1973.

PLANNING TO FACILITATE PROGRAM EVALUATION

There are several rather obvious sequential steps which should be taken in order to facilitate evaluation. The first and most important single step is commitment - the willingness to attempt it. Thus to participate effectively in any evaluative process, the individual or agency must:

1. Make a commitment: express willingness.
2. Plan the strategy for evaluation in advance of implementing the program.
3. Collect the necessary data - and this will involve the allocation of adequate time and other resources.
4. Analyze and interpret the data.
5. Deliver the information to those who will use it.
6. Accept the findings and conclusions, giving the data the value and importance dictated by the competency of the evaluation process used.
7. Re-cycle rather than rationalize. (the three R's of renovation)

The single most important reason for program evaluation is to determine if the program warrants continued operation at the same level of support. Furthermore, unless provision for modifying a program is built into it, why evaluate it? This, of course, involves the whole spectrum of planning.

> In the final analysis, however, it is the school administrator who has the best opportunity to create a certain atmosphere in his school. If this atmosphere is to support evaluation activities for teachers, it needs to be one which is open and unthreatening. Problems need to be discussed and worked through, not harbored or suppressed. Building principals need to give teachers more autonomy so that the teachers can feel more responsible to themselves, as well as to others. Teachers need to be rewarded for their efforts in evaluating their own programs and administrators can have an important role in setting up such a reward system. The reward for the administrator will be worth his effort: he will have better information about what is happening in his school, and a staff that is monitoring its own efforts. A school in which evaluation of the whole enterprise is an important process is a school that is likely to meet and respond to the growing public demand for accountability.
>
> Robert L. Wolfe, School Evaluation - The Politics and Process, by Ernest R. House, p. 167.

Without going into great detail, this process includes the following steps:

Step #1: Establish the goals of the organization or overall operation: These provide the basis for identifying needs and later setting program goals. It is critical that the clients of the organization and/or the consumers of the product be involved in setting the goals.[1/] For educational endeavors, both learner and institutional goals should be established. (See Example #1 page 25 and #2 page 26) [2/]

Step #2: Identify the need for programs: [3/] Through a process of needs assessment, compare aspirations as expressed in statements of values, philosophy and goals, with "what is" as evidenced by available data. This process leads to the identification of three types of educational programs. (See Example #3 pages 27-28)

a. Programs designed to meet learner needs represented by the discrepancy between "what is" and "what ought to be" (i.e., the need to improve reading proficiency). The greater the discrepancy the more critical the need.

b. Programs designed to meet institutional needs, also indicated by the discrepancy between "what is" and "what ought to be" (i.e., develop a budgeting and accounting system in line with the auditors' recommendations).

c. Programs designed to maintain levels of performance in either learner or institutional areas which if not carried on will result in the future development of a critical need (i.e., to maintain an intramural athletic program which includes 80 per cent of the students). In most schools these programs represent a major part of its on-going operations.

Step #3: Establish program goals: Each program goal must relate to one of the broader learner or institutional goals. They will be few in number, usually only one or two.

1/ For detail on methods and processes of goal setting, consult Establishing Goals and Goal Priorities, Nelson C. Price, San Mateo County Office of Education, 1973, pages 1-41. This monograph stresses school-community involvement.

2/ The examples are inserted also in connection with later portions of the text. To avoid flipping back and forth, the reader may wish to complete page 8; then review the examples.

3/ Price, op.cit., pages 42-50.

A word of caution: Some outputs or results of a given program may be unanticipated and/or not related to the stated goals. To benefit to the maximum from the experience of the program, provision should be made for "Goal Free" evaluation to supplement the goal-oriented evaluation. "Goal Free" evaluation occurs when the evaluator is not aware of the intended outcomes of the program. This procedure is felt by some to result in a more objective examination of the results. Although "Goal Free" results may be accidental, they may also be important.

Step #4: Specify objectives for the program: (See Example #4 page 29) 1/

a. The number of objectives for any one program should be few enough in number to permit practical collection of data related to their degree of attainment, while at the same time sufficiently numerous to encompass the major anticipated outcomes, products and processes of the program.

b. Each objective must relate directly to the philosophy and one or more goals of the organization.

c. Each objective should contain an expected level of success (criteria) to be determined by the use of measurable, observable, or quantifiable data.

Exception: For a variety of reasons, it may not always be possible to measure the results of an activity or objective. Therefore it is sometimes proper to include non-measurable objectives with the intent of discovering better assessment techniques as a part of the implementation process.

Step #5: Identify the activities and processes needed to achieve each objective. (See Example #8 page 35)

Step #6: Identify the method or strategy of evaluating the success of each activity and the level of performance considered satisfactory. (See Example #8 page 35)

Notice the emphasis on evaluating "activities". This helps break up the job of evaluation into tasks of manageable size. If well planned, the data from evaluating activities can be combined to provide an evaluation of goals and objectives.

1/ For additional information on preparing objectives and see: Developing Performance Objectives, Nelson C. Price, San Mateo County Office of Education, 1973.

Step #7: Develop the strategy or plan whereby all of the bits of data will be fitted together to provide an evaluation of the overall program. This is the evaluation design. (See Example #9 on page 36)

Step #8: Identify the limits, constraints or roadblocks which must be resolved or circumvented in order to achieve the objectives. (See Example at bottom of page 30)

Step #9: Identify the costs and resources, including personnel, needed to implement the program. (See Example #10 page 37)

You now should be able to list the major steps you will have to take to develop a program which you can effectively evaluate!

When the program evaluation process has been completed, or to put it another way, when the evaluation strategy has been implemented, answers to the following questions should be available:

1. Were the results or outcomes what were anticipated both as to type and quality?
2. Were the outcomes clearly the result of implementing the particular program being evaluated, or might they have resulted from other unanticipated factors?

Instructional Programs are the means by which educational objectives are achieved. Programming therefore is the process of determining the means of achieving objectives, and it involves two important steps.

The first general consideration is to explore several possible ways to achieve the objective sought.

A second consideration in programming is to examine alternative programs with the available resources of the institution. The school, like any other organization or institution, has limited resources available to it. This is true of both human and non-human resources.

Sam W. Bliss

3. What aspects of the program operation (activities) were most successful, and which were least effective?
4. Were the results achieved done so with the utilization of the expected level of resources or input?

As data is collected on these four questions, then decision-makers can answer three additional questions:

5. Were the results of the program worth the costs?
6. Can we afford to continue the program?
7. ... and, if so, at what expected level of outcome and with what modifications, if any?

JUDGING PROGRAM PERFORMANCE

Program performance expectation is a product of the programming planning process. While it is helpful to know actual performance for a given period, it is perhaps equally important, or more so, to know whether or not such performance agreed with or deviated from planned performance. Only then can corrective action be taken, for only then can the source of difficulties be determined. No measurement can occur in the absence of standards, and measurement of "performance" requires "performance standards".

These facts are very basic. Before one can measure distance, he must have acceptable standards of distance, such as yards or miles. Before weight can be determined, weight standards such as pounds or tons must be specified. Without such units, measurement is impossible and communication is vague and imprecise.

Thus, performance standards can be defined as a statement of the conditions that will exist when a job is well done. At the program level, the "job" is achieving the objective. Thus program standards are statements of conditions that will exist when the objective is achieved.

In summary, when writing or validating the objectives of an educational program, the following criteria should be heeded:

1. Importance and comprehensiveness. The people who have the problem agree that the stated objectives are the outcomes most important to seek in solving that problem.
2. Can it be measured? Valid ways of determining how well each objective is achieved are stated separately or are clearly implied in the objectives.
3. Does it communicate? Those persons who interpret and use the objectives clearly understand their intent.
4. If the objectives are process objectives, do they adequately define actions expected to produce outcomes? If the objectives are product objectives, are they stated in terms of outcomes, not inputs?
5. Relevance and precision. The objectives are stated as narrowly and precisely as possible without sacrificing importance. Thus planners are not misled into planning irrelevant or marginal activities by vagueness of the statement.
6. Conditions of achievement. The conditions under which achievement of the objective can be demonstrated are stated.
7. Can it be related to action? Casual events by which any plan of action might achieve the objective can be specified convincingly.

San W. Bliss

QUESTIONS NEEDING ANSWERS

Once the planning phases have been completed, it then becomes possible to implement an evaluatable program. For the next portion of this discussion, program evaluation will be divided into four components which Stufflebeam and Gubba call context, input, process, and product. (CIPP) Other specialists in evaluation use somewhat different terms since they approach evaluation from different points of view. These differences are noted in the chart on the next page. However, these four components of program evaluation seem to hold up as relatively distinct phases. Context, input, process and product in one form or another are covered in each evaluation model and each provides necessary data in these areas to provide sound decision making.

However, before analyzing these components, it is important to make some observations on means of data collection.

Educational evaluators are strongly urged to use multiple criterion measures as opposed to a single technique. When undesirable side effects are anticipated, it may be necessary to employ what can be called "unobtrusive measures". However whatever data collection methods and sources are selected, they must be appropriate for their intended use, and be the most reliable available within the resources of the evaluator.

On page 16 are criteria which can be used to aid in the selection of means for data collection. Appendix A contains two comprehensive lists of data collection devices titled "Possible Output Indicators for Educational Evaluation" by Sam W. Bliss and "Multiple Criteria Measures for Evaluation of School Progress" by Newton S. Metfessel of USC and William B. Michael of University of California at Berkeley.

To simplify consideration of the above four components of a comprehensive program evaluation each of the four will be divided into two sub-topics: Questions to be answered and sample sources of data. When these questions have been answered using the data sources listed, or other sources, you are then ready to take the final step in the evaluation process; that of making the value judgments on which your recommendations should be based.

SYNTHESIS OF TECHNOLOGY AND CONCEPTS OF VARIOUS APPROACHES TO PROGRAM EVALUATION 1/

AREA	CIPP-STUFFLE-BEAM & GUBBA	STAKE	MALCOLM PROVUS	NATIONAL STUDY OF SEC. SCHL. EVAL. (Accred.)	PRICE
Point of view, and focus or purpose	Decision-making at each of four stages	Congruency Evaluation, description and judgment	Discrepancy Evaluation, decision-making down to very small items	Self study, personnel involvement	Decision-making and motivation
Planning	Context	Antecedents	Design	School and community, needs and goals	Goals, objectives, needs
Resources	Input	Transactions	Installation	Organization, Community, staff, facilities	Resources staff, students, facilities, materials, etc.
Activities	Process	Transactions	Process	Instructional activities	Activities and processes
Products	Product	Outcomes	Product	Outcomes	Products, results, outcomes

1/ Adaption of chart developed during AASA National Academy of School Executives, Seminar and Program Evaluation, January 13-18, 1974, San Diego, Ca.

ANALYSIS OF CONTEXT

A. Questions to be answered:

1. Are the philosophy and goals of the organization clearly stated and officially accepted?
2. Is a distinction made between learner goals and institutional goals?
3. Are the goals consistent within the philosophy?
4. Are objectives stated, insofar as possible, in terms of results; do they identify observable, measurable, or quantifiable outcomes?
5. Are the objectives specifically related to the goals?
6. Is the program to be evaluated clearly described?
7. Is each activity related to one or more objectives?
8. Has provision been made for modifying the programs during operation if changes are indicated by the "formative" evaluation?
9. Is the evaluation strategy or plan clearly detailed, including assignment of responsibilities, time schedule, and resources?
10. Is the program directly related to meeting a documented learner or organizational need?

B. Sample sources of data:

1. District or school policies.
2. Statements of philosophy and goals.
3. Courses of study.
4. Program or project descriptions.
5. Project applications.
6. Needs assessment reports and studies.
7. Accreditation reports.
8. Follow-up studies and other pupil personnel data.
9. Test scores and surveys.

ANALYSIS OF INPUT

(Resources)

A. Questions to be answered:

1. What were the main characteristics of the environment which would logically have greatest impact on the program?

    a. Physical.
    b. Social.
    c. Psychological.

2. Was the environment what was anticipated?
3. Were the students or clients of the number and characteristics suited for the program?
4. Were the available resources of the type, quality, and quantity planned for and were they available when needed?

    a. Staff.
    b. Facilities.
    c. Materials.
    d. Other.

B. Sample sources of data:

1. Demographic studies and surveys.
2. Student personnel data and records.
3. Staff personnel records.
4. Program budget, or other financial documents and reports.
5. Inventories.
6. Utilization studies.

ANALYSIS OF PROCESS

(Activities)

A. Questions to be answered:

1. Were the activities implemented as planned?
2. Did the limits, constraints, or roadblocks approximate the level of severity anticipated?
3. Was the evaluation data collected as planned?
4. Did personnel perform in a competent manner?
5. Were program modifications made when indicated by data?
6. Was the effectiveness of various techniques compared?
7. Which procedures or materials proved most effective in achieving objectives?
8. Was progress approximately as planned?

B. Sample sources of data:

1. Journals, schedules, calendars, etc.
2. Anecdotal records.
3. Outside observers.
4. Records of personnel and results.
5. Rating scales and checklists.
6. Video tapes and recordings.
7. Attendance reports.
8. Health records - accident reports.

    a. Staff.
    b. Pupils.

ANALYSIS OF PRODUCT

(Results)

A. Questions to be answered:

1. Did the results of the program match the "product" described in the program's goals and objectives? Were the purposes achieved?
2. Were the results of the program what were anticipated, as to quality, quantity and time?
3. Did the program function within budgeted resources?
4. Were the political and social outcomes conducive to future progress of the institution?

B. Sample sources of data:

1. Teacher-made tests.
2. Criterion-referenced measures.
3. Standardized or norm-referenced tests.
4. Approval of "results" by systematic observers, official bodies, outside authorities, juries, etc.
5. Checklists or evaluation sheets.
6. Financial reports.
7. Client or community surveys.
8. Actions of legislature and other governmental bodies.
9. Reports of evaluation auditors or members.

You should now be able to ask the right questions about your program, and identify the sources where you can obtain information to help you evaluate it!

CRITERIA FOR SELECTING EVALUATION INSTRUMENTS AND TECHNIQUES 1/

CRITERIA RELATED TO PURPOSE

1. Measures what is intended
2. Test acceptable to its various publics
3. Results easily interpreted by appropriate publics
4. Results accepted as valid by its various publics
5. Reliability (consistency)
6. Permits program comparison
7. Allows self-evaluation
8. Creates a personal stake in the evaluation process

CRITERIA RELATED TO PROCEDURE

1. Minimal time required
2. Affordable
3. Cost effective
4. Ease of administration
5. Minimal program disruption
6. Potential for integration into regular program
7. Non-threatening
8. Available (or potentially so)
9. Content of instrument understandable to subject

1/ Developed by an ad hoc committee on Evaluation of Early Childhood Education, San Mateo County, July 1973.

FORMATIVE VERSUS SUMMATIVE EVALUATION

Formative evaluation takes place during the program operation. It evaluates learner progress and implementation processes while in operation. It may also include evaluation of context and input as they represent the planning phases of the operation. Process evaluation is also primarily formative. Summative evaluation looks at outcomes or results. Usually applied at the end of the program, this evaluation concerns actual learner achievement and the degree of success of operational procedures. The schematic depiction of this relationship as developed by the Millbrae School District is shown on the next page and in Appendix C.

Description of Process Evaluation

Process evaluation enables educators to improve an instructional program while the program is in process. Whereas traditional evaluation procedures have supplied answers only to what happened, process evaluation activities provide information about what is happening.

Two kinds of information are provided during process evaluation:

1. Implementation information - reveals the degree to which the specified elements of the program have been implemented as planned.
2. Progress information - reveals the extent to which program objectives are being attained.

To conduct a process evaluation successfully, all involved staff need to have an appropriate mind set. Basically, one attitude must prevail: "The evaluation activity is for program improvement." Teachers, principals, and other personnel must be convinced that when discrepancies are found between "what is" and "what should be", positive, constructive action will result. If staff members are apprehensive of forthcoming judgment, it is best not to waste the time and effort it takes to conduct the evaluation. In fact, more damage to the program can result from negative mind set than from not having done a process evaluation at all.

Process evaluation supplies the decision maker with implementation and progress information. He can use this information to improve his instructional program during its operation. This advantage, however, is gained only through careful planning, including an extensive communication network with the project staff.

Improving Instructional Programs Through Process Evaluation, Alexander Law, California State Dept. of Education, Sacramento, 1973, pages 1-2.

MILLBRAE SCHOOL DISTRICT
Millbrae, Ca.

(1) NEEDS ASSESSMENT

(2) PLANNING OF PROGRAMS AND EVALUATION

FORMULATION OF OPERATIONAL PROCEDURE AND STANDARDS FOR IMPLEMENTING THE PROGRAM (When, How, Who)	INSTRUCTION PROGRAM OBJECTIVES
and	and
PLANS FOR FORMATIVE AND SUMMATIVE EVALUATION OF OPERATIONAL PROCEDURES (When, How, Who)	PLANS FOR FORMATIVE AND SUMMATIVE EVALUATION OF INSTRUCTION PROGRAM OBJECTIVES ATTAINMENT

(3) FORMATIVE EVALUATION
(PROCESS EVALUATION)

IMPLEMENTATION	PROGRESS
Monitoring of Operational Procedures (When, How, and Who)	Monitoring of Instruction Program Objectives

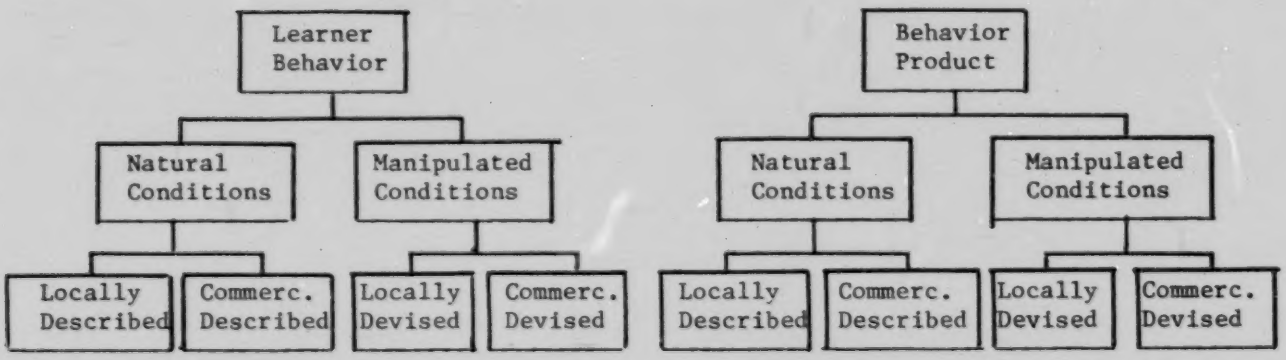
(4) SUMMATIVE EVALUATION
(OUTCOME EVALUATION)

IMPLEMENTATION (Evaluation of Operational Procedures)	PROGRESS (Evaluation of Instruction Program Outcome)
[Actual happenings compared with operational standards]	[Actual progress compared with objectives]

The product portion of summative evaluation can be simplistic or very complex. For example the "product" of a reading program can be student performance in terms of increased speed and comprehension as measured by a norm-referenced test. However another "product" simultaneously produced may be a dislike of reading. It thus follows that the product measure should be as simple and basic as possible, but it must also take into consideration both the primary results and the bi-products. This is a phase of evaluation often accidently or intentionally overlooked - or it may be ignored because of a lack of evaluation skill or imagination.

The following model refers specifically to criterion measures. However, it is obvious that it also includes other measures of program results. While this diagram separates "learner behavior" from "behavior product" both are in reality results of a program. The importance of this model is that all measures fit somewhere into this context. Greater detail in applying this model are included in Appendix B.

EDUCATIONAL CRITERION MEASURES [1]



You should now be able to explain the difference between formative and summative evaluation.

1/ W. James Popham for Southwest Regional Laboratory for Education, Research and Development, Inglewood, California. Under "Natural Conditions" the word "described" has been substituted for "devised".

"HOW TO" EXAMPLES

Now that we have discussed the "why's" and the "what's" of program evaluation, it is time to turn to the "how's". Since each step, procedure and instrument has its own set of instructions or guidelines, we will only suggest where help can be obtained and present some sample forms. Details beyond this are governed by the particular strategy selected for the project. The examples referred to on the following pages are included on pages 25 to 28. In most cases blank copies of the forms have been included in Appendix E.

> An observation on forms:
>
> Forms are only tools. Those included here have proven effective. However, they must usually be modified locally to fit the particular job to be done. Forms are tools which can be properly used or misused.
>
> Editor

NEEDS, PHILOSOPHY AND GOALS

There is no set pattern or style for reporting statements of needs, philosophy or goals. Although the form of presentation may be unimportant, it is critical to differentiate clearly between learner needs and goals, and those of the institution. It is also important to report validated needs, rather than mere expressions of concern. Example 1 on page 25 is a portion of one district's learner goals including the goal indicators. Example 2 shows how statement of philosophy and goals might be combined in an appropriate relationship. This latter is a statement of institutional goals as opposed to those for the learner. Example 3 shows a validated need. Establishing Goals and Goal Priorities published by the San Mateo County Office of Education describes in detail methods for establishing goals, validating needs, and setting priorities, and lists sources of further information and examples. 1/

> One further word on goals:
>
> The value of a specific goal depends on whether or not it is worth attaining. Goals in general aid by:
>
> 1. Providing direction.
> 2. Communicating.
> 3. Forcing planning.
> 4. Forcing documentation.
> 5. Providing ammunition.
> 6. Providing a framework for student standard.
> 7. Guiding materials selection.
>
> Blaine Worthen

1/ See footnote 1/ on Page 6.

SPECIFYING OBJECTIVES

To develop an evaluatable program, three types of objectives should be considered: Program objectives, personnel and management objectives, and instructional or task-level objectives (the terminology is not significant). Program objectives are further sub-divided between those for the learner and process objectives. Many different formats are available. However, two conditions are important to note:

A. Each objective should contain a description of the action needed to demonstrate success, the level of success required or criteria to be met, and a notation of relevant conditions.

B. When a decision is made to produce numbers of objectives of whatever type, agreement should be reached on the use of a common format. This facilitates subsequent compilation and reporting.

Example 4 is a form which has been used successfully for providing either instructional or program objectives. Notice that this form on the back makes provision for listing anticipated problems. Example 5 is usable primarily for instructional (learner) objectives while Examples 6 and 7 can be used for objectives for personnel. Additional details on writing objectives and listing of sources for further examples can be found in the monograph Developing Performance Objectives published by the San Mateo County Office of Education.[1/]

IDENTIFYING ACTIVITIES AND EVALUATION METHOD

Activities or processes are necessary to achieve objectives to reach goals to meet needs. Each activity must relate to an objective and to one or more of the goals. It is recommended that the basic evaluation data collection methods be attached to activities which are easier to evaluate than goals or objectives. Example 8 shows how activities and evaluation methods can be related to goals and objectives. When the data collected from evaluation of activities is put into context along with other data, it becomes a major part of the program evaluation.

1/ Price, op. cit.

EVALUATION DESIGN

Each phase of the evaluation must fit into the evaluation design or strategy. The chart shown in Example 9, page 36, is the first half of a design which puts together in a very simple format all of the elements necessary for the evaluation strategy. The project Cuauhtemoc is a funded ESEA Title III project for which the design has proven practical. This particular sample does not utilize the context, input, process, product matrix, but it would have been strengthened had it done so.

Having developed the comprehensive evaluation plan, it should be rated against the following eleven criteria: [1/]

A. Conceptual clarity: Is the evaluation proposal understandable by those involved?

B. Characterization of the program: Is what is to be evaluated clearly described?

C. Identification of legitimate audiences: Does the plan provide for the types of information suitable to those for whom it is intended?

D. Is the plan sensitive to policy issues of evaluation; i.e., was the staff involved?

E. Specification of information needs: Does the plan state what information is needed and its potential sources?

F. Comprehensiveness: Is the plan complete?

G. Technical adequacy: Is adequate provision made for measurement and for data reduction and analysis?

H. Program costs: Does the plan call for a consideration of program costs?

I. Explicit criteria: Are there specified standards against which to judge the data?

J. Judgments and recommendations: Does the plan specify who is to make judgments and to whom recommendations are to be made?

K. Reports: Is there provision to tailor the evaluation reports to appropriate audience? Will the report be timely? Does it use a variety of media and techniques?

1/ Presented by Dr. Blaine Worthen at the NASE Seminar on Program Evaluation, January 14, 1974, San Diego, California.

IDENTIFYING COSTS AND RESOURCES

Identifying the specific costs of a program is called program budgeting because it relates the costs of implementing activities to specified goals, objectives and activities which together make up a program. When costs of all programs are combined, they form the total budget of the organization. Examples 10 and 11 show forms for reporting the costs of a program by activity. The activities listed on this form are taken from a form similar to Example 8, page 35.

The program budgeting evaluation model includes five basic components to assure effective data collection for evaluation and decision-making.

1. the delineation of program content expressed as program skills
2. the statement of measurable program objectives
3. the statement of performance criteria or standards of anticipated program attainment
4. the development of achievement tests or assessment inventories which measure program skill attainment, and
5. the gathering of cost data for programs under examination.

Any program or course for which these data have been collected can be compared to other programs or courses to determine the relationship between program costs and benefits (student achievement or other desirable goals) and the relative merit that one program may have as opposed to all other programs or courses. This is the significant contribution that program budgeting holds for school districts.

Roger B. Werner
"Evaluating Instructional Programs"
Bulletin, National Assn. of Secondary School Principals, October 1972, p. 19

You should now have identified or adapted forms, techniques, and strategies suitable for collecting the necessary data to evaluate your program.

SOME EVALUATION TECHNIQUES RELATED TO COSTS.

One set of techniques is the cost ratio rechniques-cost/effectiveness, cost/benefit, and cost/utility methods.

Cost/effectiveness approaches are used generally in situations in which alternative outputs are designed to yield a high degree of effectiveness relative to cost. The cost/benefit approach differs from the first approach in its application to situations in which the alternative outputs are judged in terms of benefits. The assignment of the cost/utility approach requires the formulation of numerical utility values for specific activities and also the formulation and assignment of specific cost factors to those same activities. Utility in this case means the worth or the value of the activity (i.e., personal preference).

Regardless of hich of the three approaches is used the aim is to minimize the x/cost ratio (x=effectiveness or benefit or utility). Each relies heavily on quantifiable elements.

Frank W. Banghart, Albert Trull, Jr.,
Educational Planning,
The Macmillan Company; New York, 1973.

In the preceding paragraphs we have discussed largely dollar costs; but what about the other costs - the social and political implications of an activity or program?

Example:

The science unit that really "turns on" the students, but brings groups of angry parents protesting at the Board meeting.

The building program that saves the district $150,000 and gets the Superintendent fired.

The reading program which doubles pupils' power in a short time but results in accusations of "fadism" by the local assemblyman.

The welfare and attendance work which cuts the dropout rate in half and creates a breach with the County Probation Department.

These "costs" of a program cannot be ignored. Sometimes they cannot be specifically identified or reported - and we have no reporting format to recommend. However, they must always be considered. They are very real. Social and political costs should be examined in evaluating the results of any programs and should be considered in future program recommendations.

EXAMPLE 1

Sample: Statement of Learner Goals

(This page is one out of a 25-page document setting forth philosophy, goals and goal indicators of the district.)

Intellectual Discipline

Student learner goals: The Folsom Cordova Unified School District, Folsom, California, will prepare students for the accomplishment of the following goals:

1. Adaptability to change

   The student will understand change.

   Goal Indicators:

   Accomplishment of this goal will be indicated by the student's ability to:

   A. Recognize the changes as they occur in day-to-day life.
   B. Identify the forces and procedures that bring about change.
   C. Identify the forces and procedures that obstruct or prevent change.
   D. Discover or create and utilize channels to bring about change effectively.
   E. Remain receptive to new experiences.

2. Decision making and problem solving

   The student will develop decision making techniques and problem solving skills to assist him in dealing with his daily life experiences.

   Goal Indicators:

   Accomplishment of this goal will be indicated by the student's ability to:

   A. Develop logical thinking as part of the decision making.
   B. Recognize and acquire appropriate data for decision making.
   C. Analyze and evaluate the acquired data.
   D. Formulate logical decisions and arrive at solutions based upon the data.
   E. Strive for creative thinking in problem solving techniques.
   F. Accept the consequences of these decisions and solutions.

EXAMPLE 2

Sample: Statement of Institutional Philosophy and Goals

(This page is one of six setting forth the office philosophy and goals.)

Philosophy Statement #6

We believe that the San Mateo County Office of Education should serve as an exemplary model in its use of modern management and instructional technology, organizational development, evaluation and renewal, and interpersonal relations, including personnel practices.

Goal A: To develop and provide management, educational and personnel resources enabling the county office to respond to needs of the educational community for ongoing consultative or advisory services.

Goal B: To develop and implement internal policies and procedures which will serve as models of good practice in increasing individual initiative, freedom of choice, and responsibility.

EXAMPLE 3

Example of Validated Institutional Need

(This page is one of a comprehensive report of needs for the Audubon School in San Carlos, Ca. A blank copy of this form is included in Appendix E.)

CONCERN 12: There is greater need for individualism of instruction at Audubon

A. Student responses to this concern:

Individualized instruction: some felt the need for greater individualized instruction. (4 out of 16)

B. Staff responses to this concern:

Some said there was a need for more contracts, teaming and space to provide better for individual differences. (2 out of 12)

Some indicated a lack of enough aides has a detrimental effect on individualized education of children. (4 out of 12)

C. Community Concerns Conference responses:

Some parents felt the need for programs to meet the needs of individual children; e.g., slow learner, average learners, gifted, remedial, and those with learning disabilities. (7 out of 9)

Some parents felt that some children are not self-motivated and need specific goals. (6 out of 9)

D. Community survey responses:

Comments submitted: We need programs to provide for the individual differences of children; i.e., unmotivated, slow learners, learning disability, average and above average students. (6 out of 9)

Self-responsibility needs to be developed within the child. (3 out of 9)

E. Additional data related to individualization of instruction:

There has been a steady increase in pupil-adult ratio through decreasing numbers of teacher associates and student teachers.

There is inadequate time for planning for team teaching, individualized instruction, and the preparation of necessary materials.

Overcrowding has had a detrimental effect on implementation of Audubon programs.

School-Community Values and Beliefs

1. *A strong educational program should consider and meet the individual needs of the children.*

2. *There should be sufficient time to prepare programs and materials in order to meet the individual needs of the children.*

3. *There should be sufficient resources; e.g., personnel, supplies, equipment, etc., to implement the individualized instructional program.*

4. *The pupil-teacher ratio should be reduced.*

5. *The utilization of space should be compatible with the program and the needs of the children.*

Validated Need

(Includes Performance Criteria)

There is a greater need for individualized instruction at Audubon. This need will be considered resolved when (1) the staff generally agrees that they have adequate inservice programs, sufficient time and resources to prepare and implement programs of individualized instruction and they are meeting the individual needs of the children, and (2) the staff generally agrees that enrollment and space utilization are commensurate with programs.

EXAMPLE 4

DISTRICT: DOS CARLOS

SCHOOL: Washington

TEACHER: JONES

This form is usable for production of objectives by teachers. It is recommended for program, subject, or unit objectives. Note reverse side. A blank form is in Appendix E.

1. Goal Statement Reference: Morena District Goals

2. To which goal(s) does your objective relate? (abbreviate) Career Development

3. Subject Area: (check one)

____ Administration (etc.)	____ Mathematics
____ Art	____ Music
X Career Orientation	____ Physical Education
____ Foreign Language	____ Reading--Literature
____ Health and Safety	____ Science
____ Home Economics	____ Social Science
____ Language Arts	____ Other: ____

4. Title of "Unit" or Group: vocations

5. Pupil Level: (check one)

____ K - 3 (Primary)	8 Specific Grade Level (if any)
____ 4 - 8 (Upper Elementary)	____ Other

OBJECTIVE: (Who does what, how well, under what conditions?)

By the end of the year, each 8th grade student will have interviewed workers in at least three different occupations and will list in writing the personnel and educational or training requirements of each. Each student will make an appointment with one teacher of his choice in the school to discuss these requirements in relation to his own individiual qualifications.

Comments: Following the conference with the teacher, a notation will be entered on the student's permanent record form.

San Mateo County Schools
Planning & Development Division
590 Hamilton St.
Redwood City, CA 94063

Validation of the Objective:

By students:	____ YES	____ NO
By other teachers:	x YES	____ NO
Tested in actual use:	x YES	____ NO

INSTRUCTIONAL ACTIVITIES	INSTRUCTIONAL MATERIALS (include source, resource, people, and other instruction) (30)
A. *Ten visits to business locations by small groups of students.* B. *One-half hour per week for a discussion of career development.* C. *Discussion on parent night of their concerns and aspirations.* D. *Written report by each student.*	*films* *outside speakers* *tapes* *books* *mobile career trailer*

Comments and/or anticipated problems: *Library not having enough materials. Liability problems on excursions. Necessary A-V equipment not available or not working. Adequate aide time denied.*

EXAMPLE 5 INSTRUCTIONAL OBJECTIVE WRITING FORM

(STUDENT LEARNING OBJECTIVE)
(A copy of this form is included in Appendix E)

Grade or Level *Primary*

ITEMS TO BE LEARNED	ACTION	CONDITIONS AND/OR TESTING INSTRUMENTS	CRITERIA OF SUCCESS	COMMENT OR EXPLANATION
The student will demonstrate . . . *ability to add*	. . . by *completing ten two-digit addition problems*	*on a teacher-made test.*	The student will be successful if . . . *all but one are correct*	
The student will demonstrate . . . *knowledge of numeration*	. . . by *counting to 25*	*orally to the teacher or in writing when asked.*	The student will be successful if . . . *he counts without error.*	*The student will repeat the exercise weekly until successful.*
The student will demonstrate . . . *awareness of his name*	. . . by *giving his first and last name*	*orally or in writing when asked by the teacher.*	The student will be successful if . . . *he gives his name correctly 5 consecutive times at various time intervals.*	*The student will not be marked down on his spelling or penmanship.*
The student will demonstrate . . . *interest in reading*	. . . by *going to the reading center*	*voluntarily during "free" class time with several choices.*	The student will be successful if . . . *he goes to the reading center at least once per month.*	*Emphasis will be on the teacher creating interest and curiosity in each student.*

EXAMPLE 6

Staff Evaluation Proposal

(This form is one used in the San Mateo County Office of Education. A blank form is included in Appendix E.)

Name: *Miss Suzan Walter* Supervisor: *Mr. William Holstein*

Assignment:

Speech and language specialist

Student or Client Characteristics: (includes limitations)

Speech, language or hearing impaired students
Pre-school through 8th grade

Program Support Elements: (includes constraints, if any) (Those elements necessary to support the activities; include facilities, equipment, supplies, etc.)

Speech and language classrooms at assigned schools. Diagnostic and instructional materials for remediation of deficient skills. Prescribed teacher aide and clerical support.

AREA	MAJOR OBJECTIVES (PERFORMANCE) (includes rationale, conditions, actions, and form of evaluation)	PROPOSED ACTIVITIES	EVALUATION DESIGN (Sources of data, evaluation instrument, reviewer(s))
Program Planning	*To identify children with communication disorders who have not acquired the necessary communicative skills for their age and/or ability.*	*Conduct an appropriate program of screening based upon teacher and parent referrals, previous caseload and new students. Conduct diagnostic testing and teaching procedures.*	*Informal feedback from parents and teachers. Repeat requests for service.* *Through a comparison of the percentage of children identified as having a communicative disorder as compared with other similar populations.*
	Establish goals and objectives for groups and/or individual students.	*Check records and/or previous testing of child.* *Consult with teachers, psychologist and/or other related personnel.* *Prepare written objectives.*	*Appropriate objectives established for each child as approved by the regular classroom teacher and by immediate supervisor.*

AREA	MAJOR OBJECTIVES	PROPOSED ACTIVITIES	EVALUATION DESIGN (Sources of data, evaluation instruments, reviewer(s))
Program Implementing	*To remediate and develop speech and/or language skills which have been diagnosed as deficient.*	*Based upon those goals and objectives determined, provide a program designed to remediate those skills deemed insufficient.*	*Through information obtained from teachers, parents and related personnel concerning the progress of the child.* *Through appropriate formal and informal pre-and post-tests designed to evaluate gain in a skill.*
Learning Environment and Control	*Maintains student control sufficient to insure that students' behavior does not interfere with the learning of others.*	*Planning activities which hold the child's interest and which are appropriate to his age and learning level.*	*Aides, regular teachers, and parents will judge student cooperation and participation.*
Professional Growth	*Participation in available inservice training activities.*	*Attend conferences, workshops and activities related to speech and language.*	*Incorporation of new techniques into lessons.* *Reports of ideas and techniques tried and the results will be submitted to immediate supervisor.*

EXAMPLE 7

Personnel Objectives

(This form is an optional form used in the San Mateo County Office of Education and the San Mateo College District)

(A blank form is included in Appendix E)

MANAGEMENT OBJECTIVES				
Position: *Division Chairman*		Name: *Dr. Walter Jones*		Date: *Nov. 20, 1973*
Management Effectiveness Area	Objective	Result or Output Characteristics	Criteria or Standard of Proficiency and/or Measure	Conditions and/or Comments
Planned programs in the division (Program Planning)	*To see that each program within the division develops a plan of operation which ...*	*a. ... is in writing* *b. ... utilizes available resources and facilities* *c. ... permits each activity to be costed out* *d. ... contains an evaluation strategy based on measurable or observable outcome* *e. ... aids in achieving the objectives of the division and/or the goals of the organization*	*Each written plan (not its implementation) will be judged successful when:* *a. The program staff or planning staff, if available, concur with the plan* *b. The division head approves the plan* *c. An outside consultant affirms that the evaluation strategy will in fact measure the success of the program* *d. The program is allocated the necessary resources*	*a. Plans will be submitted by February 1, 1974* *b. The division will provide needed clerical help*

EXAMPLE 8

Sample Program Content Form

(This is an example of a form used in the San Mateo County Office of Education. A blank copy of the form is included in Appendix E.)

Program: *Assessment and Evaluation*	Division: *Planning and Evaluation*	Program Manager: *Dick Wagman*

PROGRAM OBJECTIVE: 1.0 *Evaluation and Needs Assessment: To provide to educational agencies in the County evaluation services including needs assessment and studies and development of evaluation designs and audits. Each report produced or program conducted will be evaluated in one or more of the following ways: (a) formal approval (adoption by agency governing board); (b) an evaluation questionnaire or survey; (c) implementation of the program.*

REFERRENT GOAL(S): 1/ *P.S. 2.C: Develop procedures for identification of needs.*
4.C: Encourage evaluation.
6.B: Models of good practice.

ACTIVITIES	METHOD OF EVALUATION
1.1 *Assessment of County Office services (Client Survey): The development and implementation of assessment design for the entire County Office including construction of assessment instruments, administration of the instruments, and analysis of the data gathered.*	1.1.1 *By August 1, 1975 the assessment instrument and procedure will be designed, circulated, and revised so that it is acceptable to each division of the County Office, the Cabinet, and the Board.* 1.1.2 *By February 1, 1976 data collection will be completed and a report received by each division, the Cabinet, and the Board which will encompass findings, analysis and recommendations concerning quality of performance for the past year and priorities of service for the coming year. At least 90% of the recommendations will be implemented.*

1/ Referrent Goal(s) refer to those adopted by the San Mateo County Office of Education; thus, P.S. 1B means Philosophy Statement 1, Goal B.

EXAMPLE 9

Example of Evaluation Design

(This example is from an ESEA Title III Project operating in Redwood City, Ca.)

MAJOR FUNCTION	PERSONS BEING EVALUATED	EVALUATION TO BE COMPLETED BY:	SOURCES OF DATA: TESTS & INSTRUMENTS	PERSONNEL RESPONSIBLE FOR DATA COLLECTION	PERSONNEL RESPONSIBLE FOR PROCESSING & ANALYSIS	BASELINE DATA	TYPE OF REPORT
1.0 Establish interim advisory board	Parents on the board	Sept. 1972	Project records	Project Director	Project Director	Not applicable	Nattative Statement
2.0 Secure funding	Project developers	April 1972	Ca. state project proposal evaluation forms	Director, State Bureau of Instructional Program Planning and Dev.	Director, State Bureau of Instructional Program Planning and Dev.	Not applicable	Letter of approval
3.0 Establish permanent executive board	Parents on the board	May 1973	Minutes of board meetings	Secretary to the Project Director	Project Director	Not applicable	Narrative Statement
4.0 Secure staff	Project Director	Sept. 1972	Personnel files	Projector	Project Director	Not applicable	Statistics on number & quality of applicants, and numbers employed
5.0 Secure facilities and related sources	Project Director	Jan. 1973	Rating scale to be developed with facilities criteria, photographs	Secretary to the Project Director	Project Director	Photographs	Tabulation of checklists results, photographs
6.0 Pre-service Training	Teacher trainees	Sept. 1972	Specific tests and forms to be developed by Project Director and project Evaluator 1/	Project Director	Project Evaluator 1/	Results on pre-test of trainees	Narrative summary and charts of test results
7.0 Cooperation with local college	Project Director	Oct. 1972	College enrollment records	Secretary to the Project Director	Project Director	Not applicable	Enrollment chart
8.0 Identify participating children	Project staff	April 1973	Project children enrollment records	Secretary to the Project Director	Project Director	Not applicable	Attendance chart
9.0 Establish evaluation procedure	Project developers and staff	Oct. 1972	Proposal evaluation design as modified	Project evaluator 1/	Project evaluator 1/	Initial draft of evaluation design	Revised evaluation design as approved

EXAMPLE 10

Activitiy Form

Description of Requested Personnel Supplies, Equipment, Facilities	Total Program Costs	Activity No. 1.0	Activity No. 2.0	Activity No. 3.0	Activity No. 4.0	Activity No. 5.0	Activity No. 6.0
CERTIFICATED SALARIES							
John Lewis	23,805	3,933	9,315	4,968	3,312	207	2,070
Vince Larsen	22,149	5,005	6,164	5,490	2,312	1,926	1,252
CLASSIFIED SALARIES							
Mary Hanson	9,315	994	3,352	2,070	166	-	2,733
RETIREMENT AND INSURANCE (CERT)							
John Lewis	1,907	412	648	346	231	126	144
Vince Larsen	1,199	189	400	361	152	15	82
RETIREMENT AND INSURANCE (CLASS)							
Mary Hanson	1,823	195	655	405	33	-	535
MILEAGE							
John Lewis	769	82	181	62	22	22	400
Vince Larsen	966	157	262	143	8	-	396
Mary Hanson	49	-	-	13	-	-	36
CONFERENCES							
John Lewis	1,062	-	162	900	-	-	-
Vince Larsen	612	-	162	450	-	-	-
CONSULTANT CONTRACT SERVICES	3,600	-	-	3,600	-	-	-
CONSULTANT TRAVEL	1,080	-	-	1,080	-	-	-
REPLACEMENT OF EQUIPMENT	63	-	-	-	-	-	63
BOOKS (REFERENCE)	900	-	225	-	-	-	675
TELEPHONE	1,500	-	-	-	-	-	1,500
CUSTODIAL SERVICES	1,467	-	-	-	-	-	1,467
OFFICE SUPPLIES	1,134	-	-	1,134	-	-	-
PHOTOCOPY	4,073	698	675	540	45	90	2,025
PRINTING (ITEK)	2,430	-	1,350	1,080	-	-	-
POSTAGE	900	-	-	-	-	-	900
RENTAL OF BUILDING	4,418	-	-	-	-	-	4,418
REPAIR OF EQUIPMENT	215	-	-	-	-	-	215
SERVICE AGREEMENTS	247	-	-	-	-	-	247
SUBSCRIPTIONS	90	-	-	-	-	-	90
UTILITIES	465	-	-	-	-	-	465
OTHER OPERATING EXPENSES	90	-	-	-	-	-	90
CAPITAL OUTLAY	473	-	-	-	-	-	473
TOTAL	86,801	11,665	23,551	22,642	6,281	2,386	20,276

EXAMPLE 11

(This is a form used in the Fremont Union High School District, San Jose, Ca. A copy of this form is included in Appendix E.)

Program Allocation Worksheet

For School Use Only:

Program _____ Budget Year 1974-75
Number Name

LIST EACH ACCOUNT ON A SEPARATE PAGE

1. 4100 Textbooks
2. 4200 Other Books
3. 4300 Instructional Supplies
4. 4410 Instructional Media Materials
   4420 Instructional Media Supplies
5. 4500 Other Supplies
6. 4800 Equipment Replacement
7. 6400 Equipment

Amount	Item	Current Inventory	Est. Unit Cost	Est. Total

TOTAL _____

THE EVALUATOR

Assignment of evaluation responsibilities is critical to the success of this phase of educational management. Obviously the evaluator must be competent and be able to communicate. However, there are other considerations to examine including:

Knowledge of the program
Access to data
Evaluation skills
Objectivity
Creditability
Cost
Time and energy

The issue involves the decision to secure an evaluator from within the staff or to go outside. Assigning the job to one of the staff has certain advantages. He will probably know the program well and have the most convenient access to data. On the other hand, an outside evaluator may have an advantage in the possession of specialized skills. He should have greater objectivity and, if properly selected, his credibility would be high. Of course an outside evaluator should have the time and energy to do the job or he shouldn't accept it. Since evaluation is more to "improve than to prove", evaluation used for decision making can be done internally. However, credibility is enhanced by an external evaluation. Comparative costs do not consistently favor one or the other of these choices. Thus the decision should be made in the light of all of those factors as related to the size and complexity of the job.

Recommendation: We recommend an evaluation team composed of the Program Manager or his designee and an outside auditor.[1/] The two should work cooperatively throughout the process. The program manager developes the evaluation plan; the auditor critiques it and suggests modifications. The manager collects the data and organizes its presentation. The auditor checks the data for accuracy and the report for its clarity, accuracy and balance.

1/ For further information consult: Ruth Cohen, William Turner, Jean Wiener, Educational Program Audit Handbook, Office of Los Angeles County Superintendent of Schools, Los Angeles, Ca., July 1973.

The manager analyzes the data and makes recommendations; the auditor checks the findings and recommendations to see if they are supported by the data. Lastly, the auditor certifies that the evaluation was or was not correctly planned and conducted, and that it was honestly and fairly reported. Both the evaluator and the auditor must be willing and able to operate within the evaluation policies of the institution. Factors which Daniel Stufflebeam consider as necessary in developing such a policy are listed in Appendix D.

Before leaving the question of the evaluator, we must mention who should participate in the evaluation process. One principle is critical. Evaluation data should be collected from all appropriate sources. In the case of an educational program this may mean utilizing parents and students, as well as staff, as data sources. As the broader school-community becomes more deeply involved in the goal setting process, as they participate in identifying goal indicators, as the school increasingly recognizes the "community" as its client, it is only logical that data on program effectiveness should be solicited from those clients.

This consideration, however, does not remove from the governing body, such as the Board of Education, the responsibility for the final evaluation -- the placing of value and the decision on the future of the program.

You should now be able to select the most appropriate evaluation team.

REPORTING THE EVALUATION

The next step in the evaluation process is that of reporting results. The report must be done in such a way that (a) it complies with the directions of the responsible agency (i.e., Board of Trustees, State Department of Education, etc.), (b) so that it provides meaningful information on which decisions can be based, and sometimes (c) so that data can be reported to a variety of publics. Hopefully all three of these purposes can be met by the same report. In achieving these three purposes, a great variety of forms have been developed by various agencies. Numerous examples are shown on the following pages.

A. What to Report:

Before going further with the discussion of reporting, it is timely to make some observations on the relationship between reporting "Quantity, Quality and Cost". Remember, an evaluation report should answer the question, "Did I achieve what I said I was going to, utilizing the anticipated resources?" In other words, "To what degree were the goals, objectives, and criteria set forth at the start of the program in fact achieved, using the planned activities and cost elements?" Three factors should be taken into consideration in developing and reporting answers to this question. These are:

1. Quantity produced
2. Quality of what was produced
3. Cost benefit

There are those who would say that counting, the number or quantity, is of little importance. All, however, agree that quality is important. Still others would say that cost benefit is not even a part of evaluation.

The point of view of this monograph is that all three have a place in the evaluation of most educational activities. It is important to know how many pupils are affected by an activity, or participated in it, how much staff time was involved, how many dollars were spent, and other quantitative items. By the same token, it is of great significance to know the quality of learning, or changes of behavior, or quality of life resulting from the program.

It therefore follows that if the evaluative data collected is to have meaning for decision-making, a determination must be made as to whether or not the client "got his money's worth". We now examine each of these three phases of evaluations separately.

Consider first the question of quantity. Since we have traditionally used quantitative data as the means of evaluation, there is real danger of placing undue emphasis on this type of data and of overlooking the qualitative and cost benefit aspects. For example, a principal as a part of his inservice program might report that 32 teachers devoted a composite total of 456 staff hours of time to inservice training during the school year. This is significant and this data has its usefulness. It does not, however, answer the qualitative question: "What happened as a result of the 456 hours?" Neither does the reported fact that 26 pupils participated in two six-hour field trips. Examples 23 and 24 on pages 59-60 report quantitative data.

The single most important aspect of evaluation deals with quality. In most situations, if the quality is lacking, the quantity is meaningless and the cost irrelevant. Measurement of quality in education is seldom easy, and often extremely difficult. The types of data to be collected fall in two general types.

These are:

1. Data collected by measures of achievement
2. Data collected by indicators of achievement

Most educators are familiar with measures of achievement. Commonly used measures are standardized tests as in reading, teacher-made tests as in history, or performance tests as in track or typing. The tests may deal with cognitive, psychomotor or affective components of learning.

Indicators of quality or of achievement are less commonly used and are more difficult to identify. However, in many cases, indicators are the only available criteria, and in others they are the most desirable criteria.[1/] They therefore play a significant part in collecting data for evaluation of quality. Experience has also shown that the identification of

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1/ See Appendix A.

indicators of achievement makes a significant contribution to increasing the flexibility of teaching methods, the excitement of learning by pupils, and an increased realism and relevance of both the learning activity and the criteria for determining pupil achievement. Examples 12 and 14 report qualitative data.

Given the fact that data on quality is important and quality more so, the matter of cost nevertheless is often the deciding factor. Educators have had little success in relating program costs to the benefits to pupils. However, efforts are being made in this direction. Roger Warner explains how this might be done.

> Though the computation of cost/benefit relationships is more complex than suggested in this table, the calculation of cost/benefit ratios for comparative purposes in decision-making becomes a matter of routine once the skill content, objectives, test design, and program costs have been established. By reviewing the gain in program achievement, the basic course or program cost, and the control or equalization of extraneous variables, principals can obtain cost/benefit relationships showing that some materials, equipment, personnel, procedures, or methodological approaches bring a higher achievement return for dollars expended than alternate programs or strategies.
>
> Table 2 below illustrates that option II produced one grade-level of achievement for every $69 expended, or $31 less of an expenditure per grade-level of achievement than the next best program.

TABLE 2: Computation of the Cost/Benefit Relationship of Several Variations of One Course

	Class Size	Innovative Aspect	Composite Student Adhievement Gain (in grade levels)	Course Cost (in dollars)	Cost/ Achievement Ratio
Option I	25	(Equipment)	20	2,000	$100/grade level
Option II	26	(Paraprofessional)	26	1,800	$ 69/grade level
Option III	25	(Special Supplementary Materials)	24	2,500	$104/grade level

Roger B. Warner, op cit., page 25.

B. To Whom to Report:

Three population groups most commonly consider information from the evaluation of educational programs. In general these are:

1. Educators in the field, usually district or school personnel
2. Governmental agencies, including the State Department of Education, the Legislature, Congress, etc.
3. The general public

For each of these groups the evaluation report is designed to do two things. First, to develop a mind-set or emotional reaction to the program. Second, to present the best possible data for making rational decisions. We may not like to recognize the first of these two purposes, but we must. To ignore its importance invites disaster.

Before commenting on the presentation of evaluation data to each of the aforementioned populations, one would do well to refer back to page 4 and review the various purposes of evaluation as seen by local versus state agencies. The type of target population not only affects the content of the report, but also its format.

Reporting to local decision makers:

It must be assumed that reporting to this group is primarily for the purpose of rational decision making - at least that is what it should be. However, any experienced administrator can cite instances of programs which were proven successful in their effects on children, in their value to staff, and their economy, but which were nevertheless abandoned or curtailed because care was not taken by the program manager or evaluator to present information in such a way that the local "decision maker" developed a favorable mind set to accompany the factual information absorbed. For example: some people are "turned off" by percentages no matter what they prove. Others reject flowcharts, or point numeric, etc. Some simply don't want to be "confused by facts". 1/ However, despite the need to consider attitudinal factors it must be assumed that the primary concern of local decision makers lies with data which is accurate, understandable, complete, and timely.

1/ In a recent study by the author as to why a year-round school proposal was rejected by the Board of Education, each of the three populations studied -- students, parents, and educators -- felt that "resistance to change" had little effect on their own decisions, but had a great effect on those of others.

Examples 12,13,14, and 15 were used to report evaluative data with this purpose in mind.

Reporting to Governmental Agencies:

Governmental agencies are faced with the difficult problem of not only evaluating individual programs and projects, but of combining a variety of data from diverse sources in such a way that is useful for making state-level decisions. As a result, state agencies emphasize standardizing data and reporting format. The information shown in Examples 16, 17 and 18 was reported to the state, but because none of the other 20 similar projects in the state used the same format, the data could not be meaningfully combined.

This dilemma leads to uniformity. To report the data on the prescribed format sometimes contributes to the reporting of artificial information or information irrelevant to the local operation. Examples 19, 20 and 21 are three of the forms used by the state to collect data from local programs. These particular forms are selected because they appear to be practical and most adaptable for local as well as state use.

Reporting to the Public:

The growing public concern about education, the credibility gap with legislatures, the frequent emotional response to educational problems all indicate the existence of a serious problem in reporting information on educational programs. Such reporting requires expertise in a variety of fields:

1. The ability to plan the evaluation
2. The ability to collect data
3. Skill in relating data to what was evaluated, AND
4. Knowing what information the various publics want as to:
    a. topic
    b. comprehensiveness
    c. timing
    d. method of presentation

Each program and each population group in each community may require unique combinations of the above factors. This "package" should be continually examined as to its effectiveness as the program unfolds. Some public information programs do an effective job; many don't. Examples 22, 23 and 24 are three illustrations of how evaluation data has been

presented to the public. No attempt is here made to present a comprehensive program of public information; only to demonstrate that with imagination technical data can be presented in understandable form.

> As you reach this point, you should be able to develop your data reporting strategy: why, what who, when and how.

The following pages 47-60 contain extracts from various evaluation reports. Each takes a somewhat different approach. It is hoped that the reader can find in them suggestions which can be adapted to any particular local program evaluation.

EXAMPLE 12

Summary of Program Evaluation (1972-73) Greenwich, Connecticut

(A copy of this form is included in Appendix E)

GOAL: (System-Wide) *Provide relevant experiences in a publicly-supported "pilot" pre-school program where the less-advantaged child will be provided with learning experiences that will enhance his chances of success in the regular school program - a pre-school program in which he "learns to learn".*

OBJECTIVES	EVALUATION
1. *Given opportunities to assess himself directly and indirectly, 50% of the students will display more positive than negative actions that reflect self concept, and give more positive than negative responses to questions that reflect self concept. Evaluation to be carried out by teacher observation and direct questioning of students.*	1. *Based on teacher observation, 73% of the students displayed behavior that would be considered reflective of a positive self concept.*
2. *Given alternative ways of acting in social situations, the child will choose to act in ways that will advance the welfare of others and be harmless to self or will advance self interest without harming others. Evaluation to be carried out by rating the students on a specified list of activities. Eighty per cent of the students will receive 80% or more "positive" ratings.*	2. *On a modified version of a pre-school social competence scale, 73% of the ratings were positive.*
3. *Given the opportunity, the child will demonstrate ability to communicate his thoughts understandably. Fifty per cent of the students will satisfactorily perform at least three of five activities from a specified list prior to June 1973.*	3. *One hundred per cent of the students met the criteria by identifying at least eight objects and three actions in a picture.*

EXAMPLE 13

(This is a copy of a portion of a Title III Project Report, Redwood City Elementary School District.)

Data From Individual Growth Inventory

PRETEST - Second Week of Enrollment		POST TEST - Final Month of Enrollment	
Large Muscle Development			
22	could walk and run easily and freely	30	could walk and run easily and freely
12	could hop on one foot	27	could hop on one foot
4	could skip on one foot	9	could skip on one foot
1	could skip with two feet	10	could skip with two feet
14	could climb easily	26	could climb easily
9	could throw a ball directly to a receiver	26	could throw a ball directly to a receiver
4	could catch a ball with ease	20	could catch a ball with ease
14	could walk on a balance beam	30	could walk on a balance beam
Small Muscle Development			
8	could cut with scissors	18	could cut with scissors
20	could handle crayons and paint brushes	30	could handle crayons and paint brushes
14	could do a simple (5-8 piece) puzzle	28	could do a simple (5-8 piece) puzzle
11	could button	23	could button
21	could zip	30	could zip
2	could lace	12	could lace
1	could tie a knot	10	could tie a knot
15	could put on their jackets	30	could put on their jackets
11	could eat without creating a mess	27	could eat without creating a mess
Intellectual Development			
10	could follow simple directions	27	could follow simple directions
12	had a suitable attention span	25	had a suitable attention span
17	had language easily understood	26	had language easily understood
6	could listen to a story and retell it	23	could listen to a story and retell it
Emotional and Social Development			
11	had a good self image	24	had a good self image
9	were generally self controlled	16	were generally self controlled
10	showed respect for equipment and materials	22	showed respect for equipment and materials
6	were willing to help clean up	20	were willing to help clean up
18	got along well with adults	30	got along well with adults
10	got along well with children	25	got along well with children
8	were willing to share	22	were willing to share

EXAMPLE 14

Comparison Data By Objective

General Mathematics

(A project operating in the Sequoia Union High School District, Redwood City, Ca.)

Objective	1972-73			1973-74			
	Pretest	Post-test	Gain (post-pre)	Pretest	Post-test	Retention	Gain (post-pre)
101	27	80	53		72		
102	33	61	28				
103	83	85	2				
104	47	66	19	60	91		31
105	23	57	34				
106	27	91	64	30	85		55
107	19	61	42				
108	5	43	38				
109	14	65	51				
Unit 1	30	68	38	47	82		43
201	44	60	16	14	69	80	55
202	35	72	37	32	72		40
203	18	44	26	29	57		28
204	31	80	49	25	72	88	47
205	21	66	45	28	59	76	31
206	58	75	17	65	85	82	20
207	84	82	-2	70	77	86	7
208	14	89	75	17	82		65
209	73	84	11	75	84		9
210	56	65	9	42	66		24
Unit 2	43	72	29	38	72	82	34
301	45	77	32	40	82		42
302	58	78	20	39	82	84	43
303	62	85	23	62	81	79	19
304	30	81	51	15	69		54
305	40	77	37	35	69	72	34
306	16	80	64	28	64	83	36
307	45	82	37	47	85	93	38
308	35	65	30	46	73	72	27
309	47	57	10	51	63	71	12
Unit 3	42	76	34	43	74	79	31

(Report submitted by Service to Rural Isolated Children Project, Shasta County Superintendent of Schools, Redding, Ca.)

EXAMPLE 15

Data From Preschool Assessment Test

PRE-TEST - Second Week of Enrollment	POST-TEST - Final Month of Enrollment
Name	
1 could recognize name	29 could recognize name
Colors	
9 could recognize yellow	30 could recognize yellow
17 could recognize red	30 could recognize red
7 could recognize blue	22 could recognize blue
12 could recognize orange	26 could recognize orange
4 could recognize purple	23 could recognize purple
6 could recognize green	24 could recognize green
4 could recognize brown	25 could recognize brown
15 could recognize black	29 could recognize black
8 could recognize white	22 could recognize white
Shapes	
8 could recognize a square	28 could recognize a square
17 could recognize a circle	30 could recognize a circle
4 could recognize a triangle	26 could recognize a triangle
2 could recognize a rectangle	20 could recognize a rectangle
Read	
0 could read at pre-primer level	7 could read at pre-primer level
Alphabet	
2 could say the alphabet and recognize some letters	17 could say the alphabet and recognize some letters
Concept of 1 - 5	
4 demonstrated the concept of 1 - 5	23 demonstrated the concept of 1 - 5
Concept of More or Less	
5 could designate more and less	28 could designate more and less
Baby and Adult Animals (out of 10)	
18 knew more than 5	30 knew more than 5

EXAMPLE 16

This was a portion of the 1971 Evaluation Report at the North Bay PACE Center, Napa, Ca. It shows a means of rating the accomplishment of a "Sub-Program" by percentage.

4.0 Sub Program: Planning Activities and Project Development

ACTIVITIES	RATING PROCESS	PRODUCT RATING	COMMENT
4.1 Inform agencies of resources.	100%	100%	No criteria was set forth under the various activities for the objective, but the overall criteria of 10 agencies developing plans or proposals was far exceeded - 17 agencies developed 28 projects. However, the percentage of these projects that were funded was extremely low, approximately 17%.
4.2 Assist in planning to use local resources.	100%	100%	
4.3 Project Development.	100%	100%	

This objective was met 100%

300 + 300 =

600 ÷ 600 = 100%

Anticipated expenditure was $6,620.00 or 7 per cent of the budget.

Actual expenditure was $18,643.59; 20% of total expenditures.

EXAMPLE 17

This example is from the 1971 Evaluation Report at the North Bay PACE Center, Napa, Ca. It shows one means of comparing anticipated resource allocation with actual expenditures for a Sub-Program. The next page shows the actual activities conducted. A copy of this form is included in Appendix E.

4.3 Project Development

4.0 Sub-Program: Miscellaneous
Planning Activities and Project Development

ANTICIPATED RESOURCE ALLOCATION		ACTUAL RESOURCE UTILIZATION		RESULTS AND EVALUATION DATA
Personnel & Misc.	Costs	Quantity	Costs	
Director (10 days)	904.00	21.2 days	1,950.40	Of the list of projects on which the Center worked, five are reported to have been funded; as of July 1, 1970, another was approved for funding; fifteen not approved; and others are pending. An evaluation by the agencies of the assistance provided by the PACE Center in project development shows that all agencies returned the evaluation forms. Concerning help as to <u>type</u>, <u>quantity</u>, and <u>critiquing</u> in working with ESEA Title III projects, 88% gave the Center the highest possible rating. For Title VI-B projects, less than 50% gave that rating. Lack of "lead time" was listed as the problem in Title VI-B. Six agencies used outside consultant help. All said it was "very helpful", and was "worth the cost".
Associate (30 days)	1,606.00	55.4 days	4,155.00	
Clerical (40 days)	1,273.00	34.3 days	1,050.98	
Local Travel (1,200 mi.)	120.00	3725	345.50	
Conference Trans. Per Diem			22.25 45.85	
Consultants (5 days)	750.00	22 days	2,950.00	
Miscellaneous			400.00	
	4,653.00		10,919.98	
Total Sub-Program	6,620.00		18,643.59	

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4.0 SUB-PROGRAM: PLANNING ACTIVITIES AND PROJECT DEVELOPMENT

4.3 Project Development

Objective: Agencies will develop anf formalize plans for resolving educational problems. At least ten agencies will develop plans (or project proposals) which will either be approved for implementation by the agency board of directors or submitted as a proposal for outside funding.

PROPOSED ACTIVITIES	SPECIFIC ACTIVITIES OF THE CENTER 1970-71	COMMENT
4.3 Assist in project development	a. Assistance was provided in developing the 31 project proposals listed on the following pages. Types of assistance included: 1. Consultant help by PACE staff 2. Outside consultant help 3. Clerical and production assistance 4. Project writing b. Amount of assistance varied from 1-2 hours of consultation, to complete production involving weeks of effort.	The percentage of project staff time devoted to project development was greatly increased due to announcement of August 1 and October 15 Title III deadlines, and the indication in December that the Center should submit an application for its own continuation. The philosophy of the Center was that the staff should not write projects for people, but rather should assist agencies in doing it for themselves. Insofar as possible this philosophy was followed.

EXAMPLE 18

This example is from the 1971 Evaluation Report of the North Bay PACE Center, Napa, Ca. It shows how the percentages rating can be weighted according to the "importance" of each objective and combined to give a total project rating.

Project Score

The following two charts use the proceeding figures to obtain a project "score". Two scores are given. The first score of 84% represents the project's achievement of its own goal using an assigned weight to the various objectives. The second score of 86.3% represents an unweighted average achievement using the PACE Center categories set forth by the California State Bureau of Programming, Planning, and Development.

I. Percentage of Achievement of Project Goal 1970-71

	Abbreviated Objective	% Score	Weight	Total
1.0	Need Assessment	91%	1	91
2.0	Develop Individual Competency	79%	3	237
3.0	Develop Agency Planning Capability	69%	2	138
4.0	Planning and Project Development	100%	2	200
5.0	Dissemination and Communication	95%	2	190
6.0	Operate Center	75%	2	150
7.0	Evaluation	89%	1	89
			13	1,095 ÷ 13 = 84

The project achieved at an 84% level for 1970-71.

EXAMPLE 19

Summary of Objectives Accomplished
(Consolidated Evaluation Report Form, Ca. State Dept. of Education)

PROJECT NO.:

Objectives: Record pro-test objectives first, (1)	Type of measure selected (Code from Form EV 73.12) (2)	Criteria for success (record by No.) (3)	Accomplishment of Objectives			Estimated cost to date(for interim objectives only) (7)	STATE USE (8)
			State yes or no & per cent (4)	Successful areas (i.e., grade levels and schools) (5)	Unsuccessful areas (i.e., grade levels and schools) (6)		

Record degree of success anticipated. Number 1 Reach desired level of performance; No. 2 Exceed comparison group; No. 3 Past Performance from baseline data. Percentage as stated in narrative; i.e., 80% of participants will ... 80% in this case equals 100% of objectives. Applies to measures of participants only; i.e., Washington School (2, 3, and 5)

EV 73.02

EXAMPLE 20

Summary of Measurement by Grade Level
(Consolidated Evaluation Form, Ca. State Dept. of Education)

PROJECT NUMBER:

Duplicate as needed and indicate type of report

FOR PROJECT SCHOOL NO. ___ ___ ___ ___ ___ ___
FOR COMPARISON SCHOOL NO. ___ ___ ___ ___ ___ ___
FOR ALL PROJECT SCHOOLS ___
FOR ALL COMPARISON SCHOOLS ___

Pre-Test Information				Post-Test Information				Pre-Post Differences			
Pre-test mo. (2)	Code No. of test & subject (3)	Number pre-tested (4)	Mean score (5)	Post-test mo. (6)	Code No. of test & subject (7)	Number post-tested (8)	Mean score (9)	% taking both pre-/post tests (10)	Difference (Col. 9 - Col. 5) (11)	Type of score (12)	STATE USE ONLY (13)

When multiple measures are to be reported for a single grade level, revise Col. (1) using add'l lines as needed. See the test list (EV 73.12); insert an * if a sub-test is used, and give its name. Where appropriate, use a scaled score (otherwise write in Raw score). Indicate the scale used; G.E. for grade equivalent, File for percentile equivalents, stand for standard scores, scaled for scaled scores, Freq. for frequency count. EV 73.01

EXAMPLE 21

Summary of Program Elements
(Consolidated Evaluation Report Form, Ca. State Dept. of Education)

PROJECT NO.:

Type indicated in Col. (1), briefly record program elements in Col. (2) and (4) which characterize the programs

Type of Program Element (examples follow each) (1)	The Regular Program (for the prior year or comparison group) (2)	The Project's Program		STATE USE (5)
		Type (3)	Program Elements Used (4)	
Staffing and their Deployment Indicate regular and support personnel, by grade level and school.				
Learning materials Basic textbooks, supplementing materials (project or commercially-prepared), and special equipment.				
Instructional methodology Procedures for instruction; i.e., use of grouping, learning stations, individual contracts, pull-out labs, and peer teaching.				

Explain the use of the project elements described in Col. 4; insert a (1) if they replace those for the regular program, a (2) if they are a modification or addition to it.

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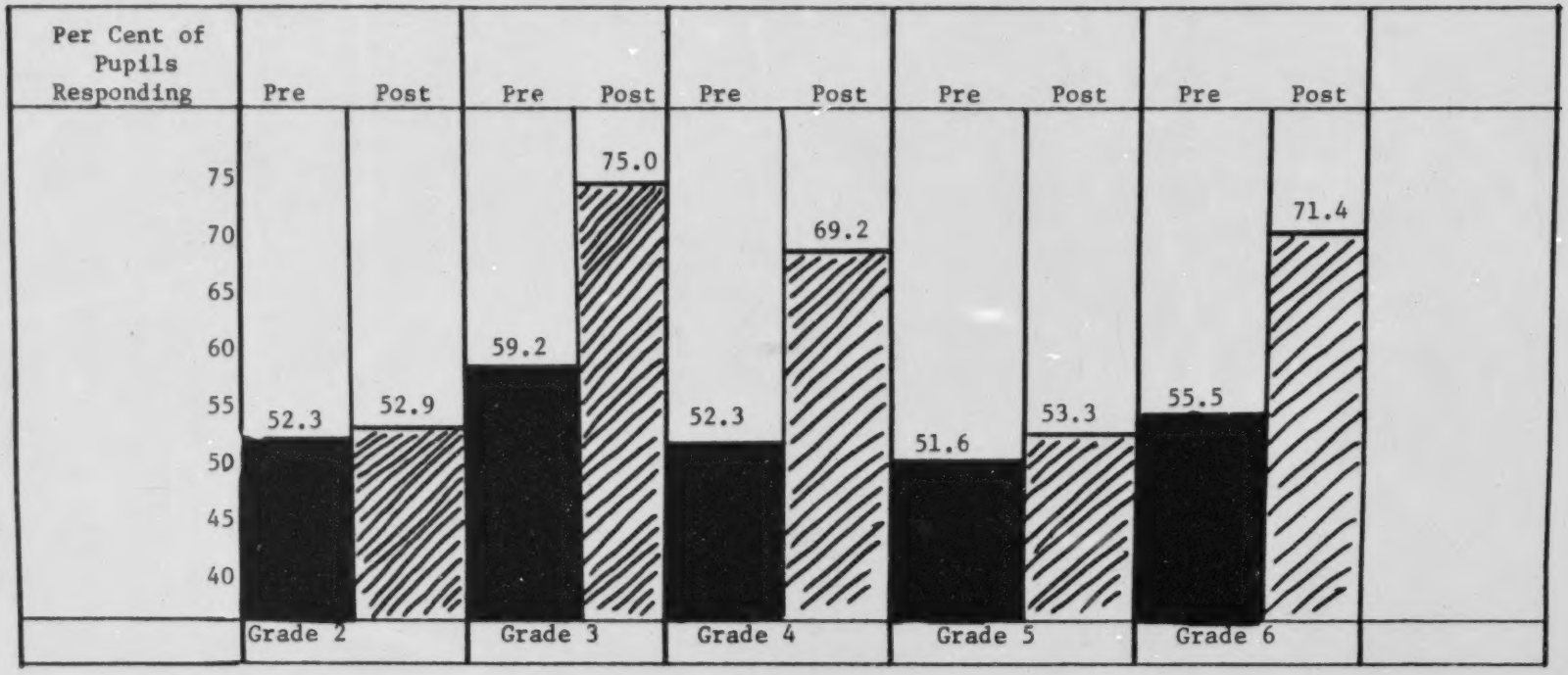
EXAMPLE 22

Chart based on data collected by the Basic Skills Improvement Project, Siskiyou County Schools

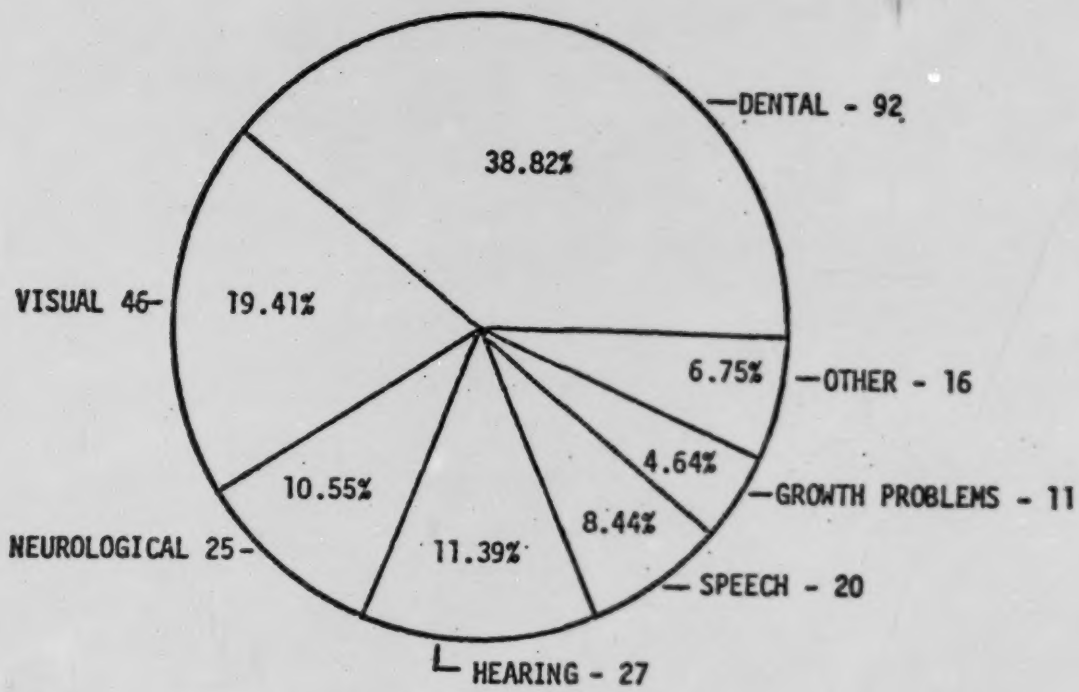
I LIKE TO READ!!

"Pre" Survey in October - "Post" Survey in May



EXAMPLE 23

PHYSICAL CONDITIONS IDENTIFIED



EXAMPLE 24

(Extract)

LEARNER DISABLING FACTORS

TOTAL MEDICAL	51%	
TOTAL SOCIAL	31%	
TOTAL EDUCATIONAL	18%	
MEDICAL	SOCIAL	Educational

DATA SOURCE: Task Force Activities Conducted in Northern California Counties in 1972-73.

PROJECT: Service to Rural Isolated Children (Dale Thorsted, Director).

LOCAL AGENCY: Shasta County Superintendent of Schools Office, Redding, Ca. (Ray Darby, Superintendent).

FUNDING OFFICES: EHA, Title IV, Part B (Dr. Art Phelan, Director); ESEA, Title III (Dr. John Schaeffer, Director).

DISSEMINATION AGENCY: Northern California Program Development Center, Chico, Ca. (B. Keith Rose, Director).

TOTAL NUMBER OF REFERRALS EXAMINED	106
TOTAL NUMBER OF REFERRALS PRESCREENED	1460
TOTAL DISTRICT POPULATIONS	5831

PUTTING IT ALL TOGETHER

We have now looked at some basic principles of evaluation, noted the steps in planning to facilitate program evaluation, have seen a sample evaluation plan and numerous examples of forms for reporting data. What remains is to put it all together; to build an evaluation plan or strategy which is comprehensive, understandable, and practical.

Forms on the next few pages are designed to help you do just that. By examining each item in the column on the left, you can determine if it is appropriate for use in your own evaluation plan. You can insert your own list of processes, personnel and objectives, make your assignments of responsibility and set your deadlines.

The final three steps in the evaluation process lie solely in your hands. These steps are:

1. Implement your evaluation plan.
2. Report the results and recommendations.
3. Act on the information resulting from the evaluation.

Without these latter three steps, all that has gone before is wasted. Without subsequent action, the allocation of resources to evaluation cannot be justified.

As you work with this model, you will modify it to fit your own needs and circumstances. However, when you have completed collecting the information called for, you will be able to make recommendations and decisions based on the best data available. You can inform your staff and others about the level of success of the program. You will be able to make intelligent judgments concerning the future of your program. You will have conducted a comprehensive program evaluation.

A MODEL PLAN (STRATEGY) FOR PROGRAM OR PROJECT EVALUATION

Program Title:	Program Director/Manager:		Location:			
Evaluation [1/] Area or Major Function	Sources of data or instruments	Person(s) Responsible for data collection	Person(s) Responsible for data reporting	Type of Report: Forms or Format	Deadline: Data collection	Deadline: Submitting rept
1.0 EVALUATION OF THE PROGRAM PLAN AND PLANNING PROCESS (CONTEXT): 1.1 Adequacy of identification and documentation of need. 1.2 Relevance and clarity of statement of program goals. 1.3 Clarity of program objectives. 1.4 Appropriateness of program functions and activities. 1.5 Adequacy of evaluation plan or strategy. 1.6 _____ 1.7 _____ 2.0 EVALUATION OF PROGRAM INPUT: 2.1 Analysis of program environment.						

1/ The term "evaluation" is used here to mean the collection and reporting of evaluation data.

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Evaluation Area or Major Function	Sources of data or instruments	Person(s) Responsible for data collection	Person(s) Responsible for data reporting	Type of Report: Forms or Format	Deadline: Data Collection	Deadline: Submitting Rept
2.2 Identification of pupil participants including characteristics. 2.3 Analysis of staff: needs availability and quality. 2.4 Identification of other resources: needs and availability 2.4.1 space 2.4.2 time 2.4.3 materials 2.5 _____ 2.6 _____						
3.0 EVALUATION OF PROGRAM PROCESSES: 3.1 Effectiveness of activities and processes, including comparative data if appropriate. List activities: 3.1.1 _____ 3.1.2 _____ 3.1.3 _____ etc. 3.3 Effectiveness in resolving constraints, limits, roadblocks, problems.						

Evaluation Area or Major Function	Sources of data or instruments	Person(s) Responsible for data collection	Person(s) Responsible for data reporting	Type of Report: Forms or Format	Deadline: Data Collection	Deadline: Submitting Rept
List: 3.3.1 _____ 3.3.2 _____ 3.3.3 _____ etc. 4.0 EVALUATION OF PRODUCT, OUTPUT, AND RESULTS: 4.1 Achievement of learner objectives: List major learner program objectives: 4.1.1 _____ 4.1.2 _____ 4.1.3 _____ etc. 4.2 Achievement of objectives for other participants such as community members, staff, etc. List: 4.2.1 _____ 4.2.2 _____ 4.2.3 _____ etc. 4.3 Achievement of organizational or institutional objectives: List 4.3.1 _____ 4.3.2 _____ 4.3.3 _____						

continued

Evaluation Area or Major Function	Sources of data or instruments	Person(s) Responsible for data collection	Person(s) Responsible for data reporting	Type of Report: Forms or Format	Deadline: Data Collection	Deadline: Submitting Rept
4.4 Analysis of program costs. 4.4.1 Financial costs 4.4.2 Political and social lists 4.4.3 _____ 4.4.4 _____						

5.0 Summary

5.1 Who is responsible for coordinating overall data collection? _____

5.2 Who is responsible for interpreting and analyzing the data? _____

5.3 Who is responsible for making recommendations and conclusions? _____

5.4 Who is responsible for reporting the results? _____

To whom? _____

By when? _____

APPENDICES

A-1 Possible Indicators for Educational Evaluation

A-2 Multiple Criterion Measures

B Extract from: Educational Criterion Measures

C Similarities and Differences Between Diagnostic, Formative, and Summative Evaluation

D Tasks for Statement of Evaluation Policies

E Blank Copies of Forms

APPENDIX A-1

Possible Output Indicators for Educational Evaluation

By: Dr. Sam W. Bliss

Number of young persons receiving educational services

Results of achievement progress testing

Results of measures of attitude change

Percent of persons equipped with independent living

Number and percent of children participating in physical education

Number and percent of children meeting specified physical standards

Number and percent of children with standard specified health habits; e.g., tooth brushing

Number and percent of children with knowledge about the effects of tobacco, alcohol and narcotics

Number and percent of children receiving sex education and knowledge of family planning

Achievement test scores: overall

Number and percent at grade level

Achievement test scores: reading, spelling and expression

Skills achievement tests

Number and percent of graduates having skill level

Number of dropouts

Number of graduates

Percent in jobs after a certain period of time

Percent enrolled in colleges and universities

Crime rates

Juvenile delinquency rates

Divorce rates

Births to unwed mothers

Indicators of tolerance of minority groups, religious and race differences

Voluntary compliance with specific public programs

Sociometric indicators

Percent participating in specific homemaker programs

Percent participating in youth activity groups

Percent holding prevailing moral beliefs

Percent acting in accord with prevailing social and moral precepts

Changes in age-specific crime rates

Number and percent participating in organized recreational and sports activities

Achievement test scores in subject areas

Number and percent at grade level

Percent of student body voting in school elections

Reduction in the number of offenders

Attitudes toward "self" and tests of information

Measured knowledge of subject areas

Number and percent participating in intellectual activities

Measured achievements relative to aptitudes

Numbers of prizes and awards

Number and percent participating in intellectual activities

Measured achievements relative to aptitudes

Numbers of prizes and awards

Number and percent participating in intermediate and advanced sciences

Number and percent participating in advanced mathematics

Number and percent participating in intermediate and advanced humanities and social science

Gain of knowledge as evidenced by pre- and post-testing in subject areas

Percent of students using services

Percent of families aided

Change in separations and divorces

Change in school performance of child

Percent of graduates admitted to college

Percent of graduates continuing for a complete college program

TAXONOMY OF EVALUATION METHODS

Adapted from Joe Dionne's of the California Testing Bureau listing.

Expert Opinion

(1) Interviewing: Telephone, letter, in person
(2) Preparation of position papers
(3) Meetings minutes

Interpretive and Analytic Studies

(4) Tertiary sources
(5) Secondary sources
(6) Primary sources
(7) Computer simulation

Surveys

(8) Public opinion polling
(9) Questionnaires
(10) Unobtrusive measurements

Behavior Observation

(11) Subjectives, global observers
(12) Controlled observation (judges)
(13) Frequency counting (coding)
(14) Teacher-made tests

Standardized Tests

(15) Personality
(16) Attitudes and values
(17) Intelligence
(18) Achievement
(19) Skills
(20) Physical health related

Experimental Measurement

(21) Independent-dependent variables control group
(22) Experimental and control groups

APPENDIX A -2

Multiple Criterion Measures

In keeping with the ideas behind validity and reliability, inferences regarding individual and group behavior must be based on considerable data. The amount of data is determined to a large extent by the credibility to be established with the community. But whatever the credibility, there is a need for multiple criterion measures in matters of evaluation. While criterion measures are many, the list composed by Newton S. Metfessel and William B. Michael and used here with their permission appears helpful in terms of considering the range of possibilities.[1/]

A. Indicators of Status or Change in Cognitive and Affective Behaviors of Students in Terms of Standardized Measures and Scales.

1. Standardized achievement and ability tests, the scores on which allow inferences to be made regarding the extent to which cognitive objectives concerned with knowledge, comprehension, understanding, skills, and applications have been attained.

2. Standardized self-inventories designed to yield measures of adjustment, appreciations, attitudes, interests, and temperament from which inferences can be formulated concerning the possession of psychological traits (such as defensiveness, rigidity, aggressiveness, cooperativeness, hostility, and anxiety).

3. Standardized rating scales and checklists for judging the quality of products in visual arts, crafts, shop activities, penmanship, letter writing, fashion design, and other activities.

B. Indicators of Status or Change in Cognitive and Affective Behaviors of Students by Informal or Semiformal Teacher-made Instruments or Devices.

1. Interviews: frequencies and measurable levels of responses to formal and informal questions raised in a face-to-face interrogation.

2. Questionnaires: frequencies of responses to items in an objective format and numbers of responses to categorized dimensions developed from the content analysis of responses to open-ended questions.

1/ Metfessel, Newton S., and Michael, William B., "A Paradigm Involving Multiple Criterion Measures for the Evaluation of the Effectiveness of School Programs", Educational and Psychological Measurement, 1967, 27, 931-943.

3. Self-concept perceptions: measures of current status and indices of congruence between real self and ideal self--often determined from use of the semantic differential or Q-sort techniques.

4. Self-evaluation measures: student's own reports on his perceived or desired level of achievement, on his perceptions of his personal and social adjustment, and on his future academic and vocational plans.

5. Teacher-devised projective devices such as casting characters in the class play, role playing, and picture interpretation based on an informal scoring model that usually embodies the determination of frequencies of the occurrence of specific behaviors, or ratings of their intensity or quality.

6. Teacher-made achievement tests (objective and essay), the scores on which allow inferences regarding the extent to which specific instructional objectives have been attained.

7. Teacher-made rating scales and check lists for observation of classroom behaviors; performance levels of speech, music and art; manifestation of creative endeavors, personal and social adjustment, physical wellbeing.

8. Teacher-modified forms (preferably with consultant aid) of the semantic differential scale.

C. Indicators of Status or Change in Student Behavior Other than Those Measured by Tests, Inventories, and Observation Scales in Relation to the Task of Evaluating Objectives of School Programs.

1. Absences: full-day, half-day, part-day, and other selective indices pertaining to frequency and duration of lack of attendance.

2. Anecdotal records: critical incidents noted including frequencies of behaviors judged to be highly undesirable or highly deserving of commendation.

3. Appointments: frequencies with which they are kept or broken.

4. Articles and stories: numbers and types published in school newspapers, magazines, journals, or proceedings of student organizations.

5. Assignments: numbers and types completed with some sort of quality rating or mark attached.

6. Attendance: frequency and duration when attendance is required or considered optional (as in club meetings, special events, or off-campus activities).

7. Autobiographical data: behaviors reported that could be classified and subsequently assigned judgmental values concerning their appropriateness relative to specific objectives concerned with human development.

8. Awards, citations, honors, and related indicators of distinctive or creative performance: frequency of occurrence or judgments of merit in terms of sealed values.

9. Books: numbers checked out of library, numbers renewed, numbers reported read when reading is required or when voluntary.

10. Case histories: critical incidents and other passages reflecting quantifiable categories of behavior.

11. Changes in program or in teacher as requested by student: frequency of occurrence.

12. Choices expressed or carried out: vocational, avocational, and educational (especially in relation to their judged appropriateness to known physical, intellectual, emotional, social, aesthetic, interest, and other factors.

13. Citations: commendatory in both formal and informal media of communication such as in the newspaper, television, school assembly, classroom, bulletin board, or elsewhere (see Awards).

14. "Contracts": frequency or duration of direct or indirect communications between persons observed and one or more significant others with specific reference to increase or decrease in frequency or to duration relative to selected time intervals.

15. Disciplinary actions taken: frequency and type.

16. Dropouts: numbers of students leaving school before completion of program of studies.

17. Elected positions: numbers and types held in class, student body, or out-of-school social groups.

18. Extracurricular activities: frequency or duration of participation in observable behaviors amenable to classification such as taking part in athletic events, charity drives, cultural activities, and numerous service-related avocational endeavors.

19. Grade placement: the success or lack of success in being promoted or retained; number of times accelerated or skipped.

20. Grade point average: including numbers of recommended units of course work in academic as well as in non-college preparatory programs.

21. Grouping: frequency and/or duration of moves from one instructional group to another within a given class grade.

22. Homework assignments: punctuality of completion, quantifiable judgments of quality such as class marks.

23. Leisure activities: numbers and types of; times spent in; awards and prizes received in participation.

24. Library card: possessed or not possessed; renewed or not renewed.

25. Load: numbers of units or courses carried by students.

26. Peer group participation: frequency and duration of activity in what are judged to be socially acceptable and socially undesirable behaviors.

27. Performance: awards, citations received; extra credit assignments and associated points earned; numbers of books or other learning materials taken out of the library, products exhibited at competitive events.

28. Recommendations: numbers of and judged levels of favorableness.

29. Recidivism by students: incidents (presence or absence or frequency of occurrence) of a given student's returning to a probationary status, to a detention facility, or to observable behavior patterns judged to be socially undesirable (intoxicated state, dope addiction, hostile acts including arrests, sexual deviation).

30. Referrals: by teacher to counselor, psychologist, or administrator for disciplinary action, for special aid in overcoming learning difficulties, for behavior disorders, for health defects or, for part-time employment activities.

31. Referrals: by student himself (presence, absence, or frequency).

32. Service points: numbers earned.

33. Skills: demonstration of new or increased competencies such as those found in physical education, crafts, homemaking, and the arts that are not measured in a highly-valid fashion by available tests and scales.

34. Social mobility: numbers of times student has moved from one neighborhood to another and/or frequency with which parents have changed jobs.

35. Tape recordings: critical incidents contained and other analyzable events amenable to classification and enumeration.

36. Tardiness: frequency of.

37. Transiency: incidents of.

38. Transfers: numbers of students entering school from another school (horizontal move).

39. Withdrawal: numbers of students withdrawing from school or from a special program (see Dropouts).

D. Indicators of Status or Change in Cognitive and Affective Behaviors of Teachers and Other School Personnel in Relation to the Evaluation of School Programs.

1. Articles: frequency and types of articles and written documents prepared by teachers for publication or distribution.

2. Attendance: frequency of, at professional meetings or at inservice training programs, institutes, summer schools, colleges and universities (for advanced training) from which inferences can be drawn regarding the professional person's desire to improve his competence.

3. Elective offices: numbers and types of appointments held in professional and social organizations.

4. Grade point average: earned in postgraduate courses.

5. Load carried by teacher: teacher-pupil or counselor-pupil ratio.

6. Mail: frequency of positive and negative statements in written correspondence about teachers, counselors, administrators, and other personnel.

7. Memberships including elective positions held in professional and community organizations: frequency and duration of association.

8. Model congruence index: determination of how well the actions of professional personnel in a program approximate certain operationally-stated judgmental criteria concerning the qualities of a meritorious program.

9. Moonlighting: frequency of outside jobs and time spent in these activities by teachers or other school personnel.

10. Nominations by peers, students, administrators or parents for outstanding service and/or professional ompetencies: frequency of.

11. Rating scales and checklists (e.g., graphic rating scales or the semantic differential) of operationally-stated dimensions of teachers' behaviors in the classroom or of administrators' behaviors in the school setting from which observers may formulate inferences regarding changes of behavior that reflect what are judged to be desirable gains in professional competence, skills, attitudes, adjustment, interests, and work efficiency; the perceptions of various members of the total school community (parents, teachers, administrators, counselors, students, and classified employees) of the behaviors of other members may also be obtained and compared.

12. Records and reporting procedures practiced by administrators, counselors, and teachers: judgments of adequacy by outside consultants.

13. Termination: frequency of voluntary or involuntary resignation or dismissals of school personnel.

14. Transfers: frequency of requests of teachers to move from one school to another.

E. Indicators of Community Behaviors in Relation to the Evaluation of School Programs.

1. Alumni participation: numbers of visitations, extent of involvement in PTA activities, amount of support of a tangible (financial) or a service nature to a continuing school program or activity.

2. Attendance at special school events, at meetings of the board of education, or at other group activities by parents: frequency of.

3. Conference of parent-teacher, parent-counselor, parent-administrator sought by parents: frequency of request.

4. Conferences of the same type sought and initiated by school personnel: frequency of requests and record of appointments kept by parents.

5. Interview responses amenable to classification and quantification.

6. Letters (mail): frequency of requests for information, materials, and servicing.

7. Letters: frequency of praiseworthy or critical comments about school programs and services and about personnel participating in them.

8. Participant analysis of alumni: determination of locale of graduates, occupation, affiliation with particular institutions, or outside agencies.

9. Parental response to letters and report cards upon written or oral request by school personnel: frequency of compliance by parents.

10. Telephone calls from parents, alumni, and from personnel in communications media (e.g., newspaper reports): frequency, duration, and quantifiable judgments about statements monitored from telephone conversations.

11. Transportation requests: frequency of.

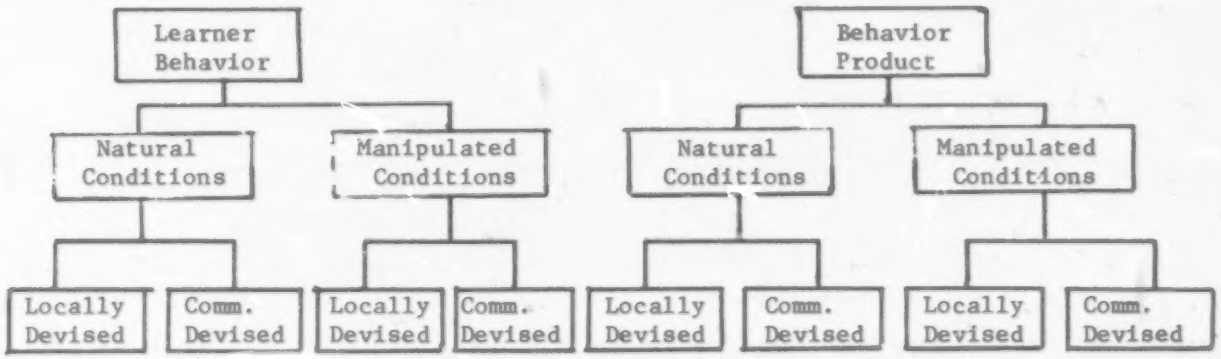
APPENDIX B

Extract from: Educational Criterion Measures

W. James Popham, Author

A final dimension can now be added to our criterion measures classification model, namely, whether the measure was devised locally or by some commercial or governmental agency. This is a rather important distinction to make since educators tend to rely too heavily on commercially-published psychometric measures and only infrequently attempt to prepare by themselves measurement procedures which would be more relevant for the assessment of peculiarly local instructional objectives. Thus, drawing a distinction between locally-devised and commercially-devised measures, our complete criterion measures model now looks like this:

Educational Criterion Measures



Incidentally, related to this last dimension, that is, locally versus commercially-devised measures, is a distinction drawn by measurement experts between so called norm-referenced and criterion-referenced measures. Norm-referenced measures are those which are used to identify a student's relative standing with respect to other learners, such as when we report that Johnny falls at the 70th percentile on a particular examination. Most standardized achievement

tests were originally devised with this purpose in mind. Criterion-referenced tests, on the other hand, are used to assess the degree to which a student's achievement resembles a desired terminal performance, such as when Johnny can satisfactorily answer 80 percent of the test items based on a particular instructional objective. Criterion-referenced tests, therefore, indicate a particular learner's competence in relationship to a desired criterion, not in relationship to other learners.

Learner Behavior - Natural Conditions - Locally-Devised

Let's see how the final dimension of locally versus commercial development works in classifying criterion measures. First, with learner behaviors under natural stimulus conditions we might think of all sorts of highly-useful observation data which could be secured by the ingenious local evaluator. For example, most educational archival data such as health, attendance, and certain other school records could be used to secure information regarding how learners react under relatively normal conditions. The astute evaluator will also wish to prepare observation devices, for instance, check lists or mechanical recording procedures, which could be used - sometimes surreptitiously - to record learner behavior in natural settings.

Learner Behavior - Natural Conditions - Commercially-Devised

Although they are not plentiful, there are also commercially-devised instruments which can be employed as criterion measures for recording learner behavior in each of the three domains for several subject areas. There are also a variety of checklists and rating scales which can be used in systematically recording different aspects of teacher and pupil classroom behavior. These instruments would be properly classified as commercially-devised measures which could be used to record learner behavior in response to natural stimulus conditions.

Learner Behavior - Manipulated Conditions - Locally-Devised

As far as learner behavior under manipulated stimulus conditions, it is possible to conceive of many ways in which local evaluators could manipulate a situation in order to record the type of learner responses in which they were interested. For example, one might engage the assistance of colleagues or pupils to serve as accomplices in presenting such stimuli as strongly prejudicial verbal statements in order to note how learners would respond. Another obvious example would be assigning speeches to pupils in order to judge specified kinds of responses ranging from confidence to actual speaking ability. It is also relatively simple to manipulate the physical environment, such as posters, etc., in such a way as to promote particular kinds of learner responses.

Learner Behavior - Manipulated Conditions - Commercially-Devised

For learner behavior in response to commercially-devised manipulated conditions there are fewer examples which come readily to mind. Certain "situational stress" tests are available, for example, in which the user is provided with a set of instructions to accomplices who contrive to produce certain classes of responses in the learner. For instance, in one of these tests the accomplices actually attempt to frustrate the learner in order to check his degree of frustration tolerance.

Other examples might include standardized performance tests for physical education and commercially-distributed foreign language tests in which the examiner presents the pupil with a series of foreign phrases and then judges, according to specified criteria, the quality of the pupil's oral responses.

Turning to the products of learner behavior, it is also possible to categorize them according to whether they are produced as a consequence of natural or manipulated conditions and whether the measurement scheme was locally or commercially-devised.

Behavior Products - Natural Conditions - Locally-Devised

To illustrate, in the case of locally-devised procedures for measuring products yielded in response to natural conditions we can think of the previously-mentioned examples of school litter and defaced school property.

Behavior Products - Manipulated Conditions - Locally-Devised

For the locally-devised analysis of behavior products occurring under manipulated conditions there are all of the locally-constructed tests, questionnaires, attitude inventories, etc. Some measurement experts refer to these as ad hoc measures, for often they are quite literally devised "for the case only".

Behavior Products - Natural Conditions - Commercially-Devised

There are relatively few examples of commercially-published methods of measuring behavior products yielded in response to natural stimuli. Among these are the commercially-published analysis schemes for judging the quality of handwritten or typewritten products which are produced by learners as a consequence of natural conditions. For instance, if commercially-devised scales for judging penmanship are applied to the non-school related products of learners, we have an example of this class of criterion measures.

Behavior Products - Manipulated Conditions - Commercially-Devised

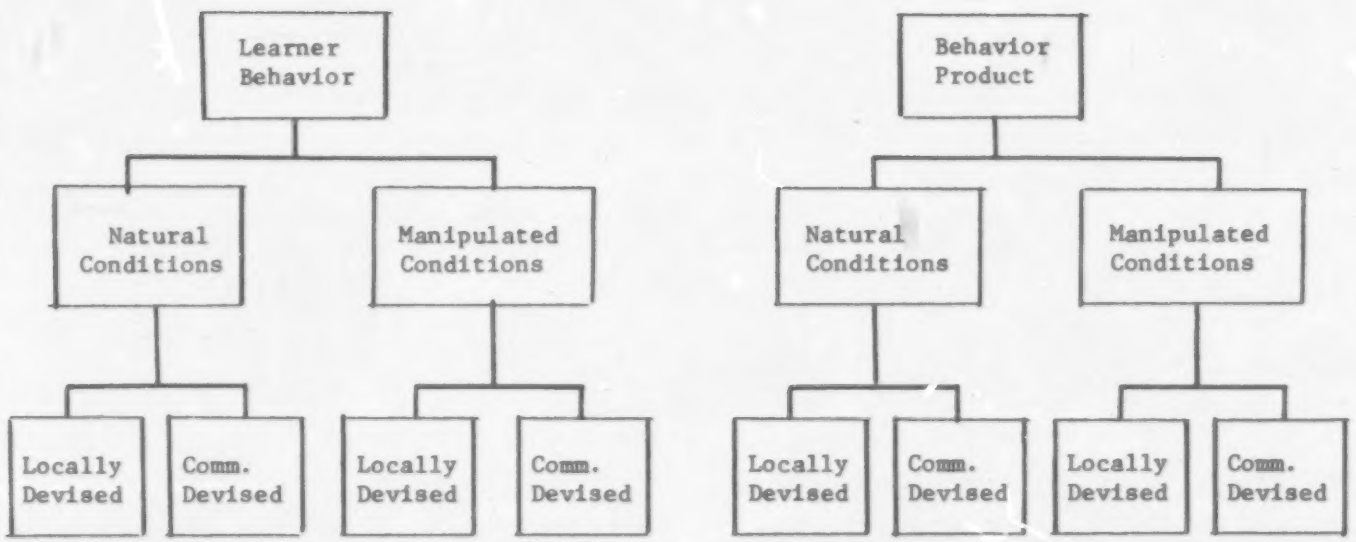
Finally, for commercially-devised procedures of treating behavior products yielded under manipulated conditions, we can think of the hundreds of commercially-devised standardized tests developed over the years.

Recapitulating, then, one way of considering the range of educational criterion measures is to categorize them into a scheme yielded by using the following three dimensions:

Learner Behavior	----	Behavior Product
Natural Stimuli	----	Manipulated Stimuli
Locally-Devised	----	Commercially-Devised

Applying these three categories, we arrived at this model for classifying educational criterion measures.

Educational Criterion Measures



APPENDIX C

Similarities and Differences Between
Diagnostic, Formative, and Summative Evaluation

Type of Evaluation

	Diagnostic	Formative	Summative
Function	Placement: Determining the presence or absence of prerequisite skills Determining the student's prior level of mastery Classifying the student according to various characteristics known or thought to be related to alternative modes of instruction Determination of underlying causes of repeated learning difficulties	Feedback to student and teacher on student progress through a unit Location of errors in terms of the structure of a unit so that remedial alternative instruction techniques can be prescribed	Certification or grading of students at the end of a unit, semester or course
Time	For placement at the outset of a unit, semester, or year's work During instruction when student evidences repeated inability to profit fully from ordinary instruction	During instruction	At the end of a unit, semester, or year's work
Emphasis in Evaluation	Cognitive, affective, and psychomotor behaviors	Cognitive behaviors	Generally cognitive behaviors; depending on subject matter, sometimes

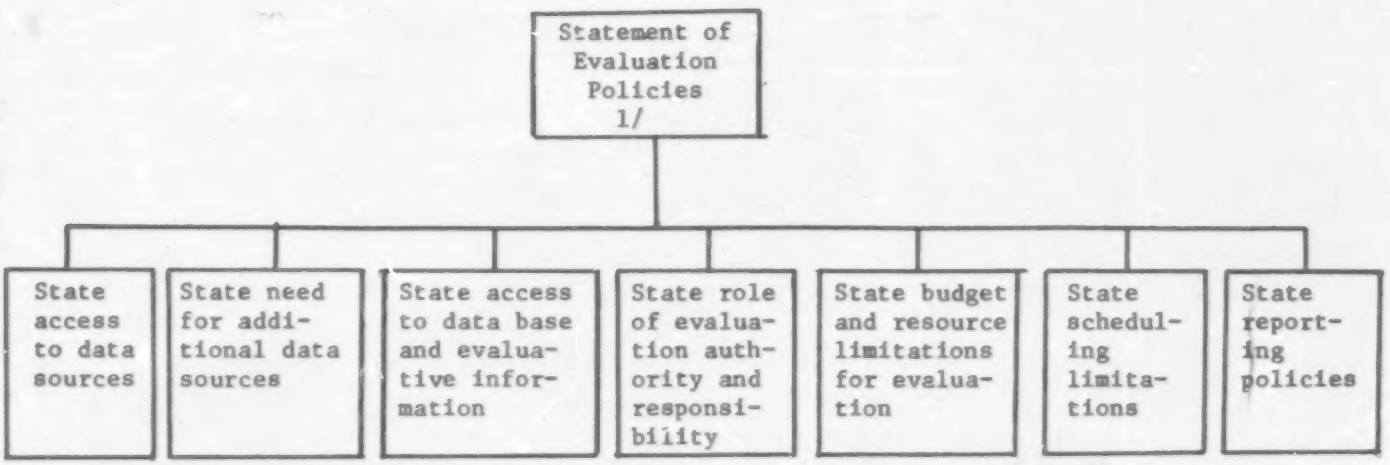
			psychomotor; occasionally affective behaviors
Type of Instrumentation	Formative and summative instruments for pretests Standardized achievement tests Standardized diagnostic tests Teacher-made instruments Observation and checklists	Specially designed formative instruments	Final or summative examinations
How objectives of evaluation are sampled	Specific sample of each prerequisite entry behavior Sample of weighted course objectives Sample of student variables hypothesized or known to be related to a particular type of instruction Sample of physically, emotionally, or environmentally related behaviors	Specific sample of all related tasks in the hierarchy of the unit	A sample of weighted course objectives
Item difficulty	Diagnosis of prerequisite skills and abilities; a large number of easy items, 65% difficulty or higher	Cannot be specified beforehand	Average difficulty, ranging from 35% to 70%, with some very easy and some very difficult items

Scoring	Norm- and criterion-referenced	Criterion-referenced	Generally norm-referenced but can be criterion-referenced
Method of reporting scores	Individual profile by subskills	Individual pattern of pass-fail scores on each task in the hierarchy	Total score or subscores by objectives

Source: HANDBOOK ON FORMATIVE AND SUMMATIVE EVALUATION OF STUDENT LEARNING Benjamin S. Bloom, J. Thomas Hastings, George F. Madaus McGraw Hill Book Company, 1971; Section 2, Using Evaluation for Instructional Decisions; Chapter 5, Evaluation for Placement and Diagnosis, page 92.

APPENDIX D

Tasks for Statement of Evaluation Policies


Statement of Evaluation Policies 1/
State access to data sources
State need for additional data sources
State access to data base and evaluative information
State role of evaluation authority and responsibility
State budget and resource limitations for evaluation
State scheduling limitations
State reporting policies

Statement of evaluation policies. This statement of policies on conducting the evaluation should include the elements in Figure 1. Such statements identify the degree of freedom the evaluator has in his work, as well as the constraints on the evaluation.

Access to data sources specifies the records and sources of information available or not available to the evaluator for data. For example, a school system may not wish to open its professional staff evaluation file to an inquiry that is to provide information to community groups about schools, but the system might make information available about teacher education and experience. Or, access to students for extensive data collection might be restricted because of the lack of time in student schedules for non-instructional activities. How is the evaluator to approach classroom teachers, principals, and other administrators? Is he to follow a preestablished channel, gain permission on an ad hoc basis, or have automatic entry wherever he goes? Regardless of the reason or limitation, the policy for access to data sources must be stated before the evaluation begins, so that the freedoms and constraints are considered in the overall design, and alternative sources are used when necessary and possible.

Need for additional data sources. Many programs lack sufficient evaluation because data relative to the programs is lacking. Evaluation schemes should be developed for all such programs. How is this to be accomplished? What new or additional sources of data are available?

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1 Stufflebeam, Daniel L., et al, Educational Evaluation and Decision Making. Illinois: F. E. Peacock Publishers, Inc., 1971.

Access to the data base and evaluative information is simply a policy for data utilization. Who is entitled to information? What criteria are to be used in determining this? Is feedback to data sources to be employed, or will such feedback intervene with the treatment in an undesirable manner? How is the anonymity of a respondent to be protected--or is there a need for such anonymity? Is aggregation to be used to protect data sources?

The role in which evaluation authority and responsibility is placed provides the organizational focus upon who has the authority to evaluate, and it also identifies who carries out the various activities in the evaluation. This statement should leave no doubt concerning who does what--they could even indicate specific subtasks, with specific roles for individuals.

Budgetary limitations. Information costs money. The budgetary statement should include the amount of support and reflect the sources of funds or resources available. For example, evaluation for a specially-funded project may be supported solely from project funds or may receive partial support from allocations of general system funds. The scope of the evaluation is highly dependent upon budgetary constraints; in many cases, it will be necessary to assign priorities to information (and, in turn, decisions).

Scheduling limitations. Information specifically developed for a project or program has time value. It is perishable and rapidly loses utility after a decision has been made. Information available before a decision becomes one of the bases for that decision; availability after the decision has been made limits the role of evaluation information to one of justification or rebuke.

The evaluator, therefore, has a responsibility to establish the scheduling limitations based on decisions to be made and the timing of those decisions. He must recognize not only what he can do toward meeting those scheduling limitations but also what he cannot do.

Reporting policies. Reporting is not a one-time, end-of-the-road process. It should be continuous, persisting from the first delineation of information needs through the time when no decisions remain to be made. Reporting for planning decisions may occur at any time, since the need for planning decisions continually exists.

APPENDIX E

The following pages contain blank copies of several of the forms referred to in the text. They are placed at the end of the Monograph to permit their easy removal and duplication if desired.

EXAMPLE 3

Validated Institutional Need Form

CONCERN:

A. Student responses to this concern:

B. Staff responses to this concern:

C. Community Concerns Conference responses:

D. Community survey responses:

E. Additional data related to individualization of instruction

School-Community Values and Beliefs
Validated Need **(Includes Performance Criteria)**

EXAMPLE 4

DISTRICT: _____

SCHOOL: _____

TEACHER: _____

This form is usable for production of objectives by teachers. It is recommended for program, subject, or unit objectives. Note reverse side.

1. Goal Statement Reference: _____

2. To which goal(s) does your objective relate? (abbreviate) _____

3. Subject Area: (check one)

_____ Administration (etc.)	_____ Mathematics
_____ Art	_____ Music
_____ Career Orientation	_____ Physical Education
_____ Foreign Language	_____ Reading--Literature
_____ Health and Safety	_____ Science
_____ Home Economics	_____ Social Science
_____ Language Arts	_____ Other: _____

4. Title of "Unit" or Group: _____

5. Pupil Level: (check one)

_____ K - 3 (Primary)	_____ Specific Grade Level (if any)
_____ 4 - 8 (Upper Elementary)	_____ Other

OBJECTIVE: (Who does what, how well, under what conditions?)

_____

_____

_____

_____

_____

_____

Comments: _____

_____

San Mateo County Schools
Planning & Development Division
590 Hamilton St.
Redwood City, CA 94063

Validation of the Objective:

By students:	_____ YES	_____ NO
By other teachers:	_____ YES	_____ NO
Tested in actual use:	_____ YES	_____ NO

INSTRUCTIONAL ACTIVITIES	INSTRUCTIONAL MATERIALS (include source, resource, people, and other instruction)

Comments and/or anticipated problems: _____

EXAMPLE 5 INSTRUCTIONAL OBJECTIVE WRITING FORM

(STUDENT LEARNING OBJECTIVE)

Grade or Level _____

ITEMS TO BE LEARNED	ACTION	CONDITIONS AND/OR TESTING INSTRUMENTS	CRITERIA OF SUCCESS	COMMENT OR EXPLANATION
The student will demonstrate . . .	. . . by _____		The student will be successful if . . .	
The student will demonstrate . . .	. . . by _____		The student will be successful if . . .	
The student will demonstrate . . .	. . . by _____		The student will be successful if . . .	
The student will demonstrate . . .	. . . by _____		The student will be successful if . . .	

EXAMPLE 6

Staff Evaluation Proposal

(This form is one used in the San Mateo County Office of Education.)

Assignment:

Student or Client Characteristics: (includes limitations)

Program Support Elements: (includes constraints, if any) (Those elements necessary to support the activities; include facilities, equipment, supplies, etc.)

AREA	MAJOR OBJECTIVES (PERFORMANCE) (includes rationale, conditions, actions, and form of evaluation)	PROPOSED ACTIVITIES	EVALUATION DESIGN (Sources of data, evaluation instrument, reviewer(s))

AREA	MAJOR OBJECTIVES	PRCPOSED ACTIVITIES	EVALUATION DESIGN (Sources of data, evaluation instruments, reviewer(s))

EXAMPLE 7

Personnel Objectives

MANAGEMENT OBJECTIVES				
Position:		Name:		Date:
Management Effectiveness Area	Objective	Result or Output Characteristics	Criteria or Standard of Proficiency and/or Measure	Conditions and/or Comments

EXAMPLE 8

Sample Program Content Form

Program:	Division:	Program Manager:
PROGRAM OBJECTIVE:		
REFERRENT GOAL(S): 1/		
ACTIVITIES	METHOD OF EVALUATION	

1/ Referrent Goal(s) refer to those adopted by the ... Office of Education; thus, P.S. 1B means Philosophy Statement 1, Goal B.

EXAMPLE 10

Activitiy Form

Description of Requested Personnel Supplies, Equipment, Facilities	Total Program Costs	Activity No. 1.0	Activity No. 2.0	Activity No. 3.0	Activity No. 4.0	Activity No. 5.0	Activity No. 6.0

EXAMPLE 11

(This is a form used in the Fremont Union High School District, San Jose, Ca.)

Program Allocation Worksheet

For School Use Only:

Program _____ Budget Year 1974-75
Number Name

LIST EACH ACCOUNT ON A SEPARATE PAGE

1. 4100 Textbooks
2. 4200 Other Books
3. 4300 Instructional Supplies
4. 4410 Instructional Media Materials
   4420 Instructional Media Supplies
5. 4500 Other Supplies
6. 4800 Equipment Replacement
7. 6400 Equipment

Amount	Item	Current Inventory	Est. Unit Cost	Est. Total

TOTAL _____

EXAMPLE 12

Summary of Program Evaluation

GOAL: (System-Wide)

OBJECTIVES	EVALUATION

EXAMPLE 17

Sub-Program: _____

ANTICIPATED RESOURCE ALLOCATION		ACTUAL RESOURCE UTILIZATION		RESULTS AND EVALUATION DATA
Personnel & Misc.	Costs	Quantity	Costs	